



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

Programme: B.Sc. Honours Animation (Major)

w.e.f. AY 2023-24

COURSE STRUCTURE

Semester	Course Number	Course Name	No. of Hrs/Week	No. of Credits
Semester-I	1	Art Foundation	3+2	4
	2	Animation industry Perspectives	3+2	4
Semester-II	3	Basic Drawing	3	3
		Basic Drawing Lab	2	1
	4	Graphic Design	3	3
		Graphic Design Lab	2	1
Semester-III	5	2D Animation	3	3
		2D Animation Lab	2	1
	6	Story to Script	3	3
		Story to Script Lab	2	1
	7	Stop Motion Animation	3	3
		Stop Motion Animation Lab	2	1
	8	Film Studies	3	3
		Film Studies Lab	2	1
Semester-IV	9	Introduction to 3D	3	3
		Introduction to 3D Lab	2	1
	10	Compositing - I	3	3
		Compositing - I Lab	2	1
	11	Game Design	3	3
		Game Design Lab	2	1
Semester-V	12	Advanced 3D	3	3
		Advanced 3D Lab	2	1
	13	Compositing - II	3	3
		Compositing - II Lab	2	1
	14	Web Publication	3	3
		Web Publication Lab	2	1
	15	Digital Film Editing	3	3
		Digital Film Editing Lab	2	1
Semester-VI	Internship			
Semester-VII	16	E Learning	3	3

		E Learning Lab	2	1
	17	2D Design	3	3
		2D Design Lab	2	1
	18	2D Game	3	3
		2D Game Lab	2	1
	SEC			
	19	I Clone	3	3
		I Clone Lab	2	1
	20	Elevation Design	3	3
		Elevation Design Lab	2	1
Semester-VIII	21	Acting for Animation	3	3
		Acting for Animation Lab	2	1
	22	Advanced Texturing	3	3
		Advanced Texturing Lab	2	1
	23	Environment Design	3	3
		Environment Design Lab	2	1
	SEC			
	24	Digital Environment	3	3
		Digital Environment Lab	2	1
	25	Game Concepts	3	3
		Game Concepts Lab	2	1

SEMESTER-I
COURSE 1: ART FOUNDATION

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Understand the basic art study
- Enhance the basic knowledge about the art and paint
- Apply different techniques about the art
- Demonstrate the handling of various types or art and paint

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Understanding of various concepts of art foundation
- Using different techniques to work on art and paint
- Apply design theory of art
- Analyze and critique design work, both their own and that of others, using design principles and effective visual communication techniques.
- Present design concepts and solutions effectively, both verbally and visually, to clients or stakeholders, articulating design choices and justifying design solutions.

III. Syllabus:

Unit - I: Introduction to art, Purpose of art, Art forms, Art and morality, Art and Religion, Art and methods, Art styles

Unit - II: Indian art, art concept, art and classification, line, shape, form, mass, value, color, texture, design principles, art balance, variety of art, emphasis of art

Unit - III: Art movement, art scale, art proportion, art repetition, drawing and painting tools, drawing techniques, painting techniques, arts of terms

Unit - IV: Nature drawing, bird life study, outdoor sketching, toon drawing, doodling, live study, animal study, time sketches, movement study

Unit - V: Clay modeling, designing character, props using box and oil based clay, animation using clay character and props, set designing, stone design, grass design, playing with water colors, poster color, dry brush, pastel colors

IV. References:

1. The Story of Art" by E.H. Gombrich: A classic and comprehensive introduction to art history, covering various artistic periods and styles from prehistoric times to the present day.
2. Ways of Seeing" by John Berger: This influential book explores how we perceive and interpret art, delving into the social and cultural contexts that shape our understanding of visual images.
3. Art Fundamentals: Theory and Practice" by Ocvirk, Stinson, Wigg, and Bone: An essential textbook that covers the fundamental principles of art, including elements such as line, shape, color, composition, and perspective.
4. The Elements of Color" by Johannes Itten: A valuable resource for understanding the principles of color theory, exploring concepts like hue, value, saturation, and color harmonies.
5. Drawing on the Right Side of the Brain" by Betty Edwards

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

1. Art and paint assignments
2. Seminar/Workshop on art and design industry
3. The student will demonstrate the art works with print or manual
4. Getting the knowledge on the live experience
5. RVJ (Reflective Visual Journal) on the theory and particles

b) Suggested Co-Curricular Activities:

1. Oral presentations
2. Self-reflective blogs
3. Practical production works
4. Peers and self –assessment for output
5. Invited lectures and presentations on related topics

SEMESTER-I
COURSE 1: ART FOUNDATION

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Basic shapes and still life
2. Anatomy and portrait
3. Art using water color
4. Art using acrylic color
5. Drawing using crayon
6. Drawing with charcoal and pencil study

SEMESTER-I
COURSE 2: ANIMATION INDUSTRY PERSPECTIVES

Theory

Credits: 3

3 hrs/week

Course Objectives:

- Understanding the fundamental principles of animation is crucial
- Learning industry-standard software tools is essential in animation
- Developing strong artistic skills is important in animation
- The animation industry offers various specialization areas such as character animation, visual effects, motion graphics, stop motion, 2D animation, and 3D animation

Learning Outcomes

Students at the successful completion of the course will be able to:

- Understanding of storytelling and narrative development
- Knowledge of the animation production pipeline
- Portfolio development showcasing student work
- Collaboration and teamwork skills.
- Familiarity with industry trends and practices.

6. Syllabus:

Unit - I: Fundamentals of computer graphics, types of graphics, different file formats, different video formats, Aspect ratio, Resolution(PPI,DPI, Color wheel

Unit - II: History of animation, history of pioneers, basic of films, basic cinematic terms and concepts, development of the animation industry, development of visual effects industry

Unit - III: 12 principles of animation, dialoguer recording, Origin of modern art, Stylistic movements, periods and artistes, Realism – millet, Corot, Courbet, artist and their paintings, Impressionism, Post – impressionism,

Unit - IV: Fauvism, Cubism, Picasso, Dadaism, Surrealism, POP art, Performing art forms, Early reference to art and beauty, Film and animation

Unit - V: Time, Space and other formal elements of art, New media art form, site specific works, environmental art, digital works, AR/VR and Emerging new forms, Casting and performance, settings and location, pipeline

IV. References:

6. "The Animator's Survival Kit" by Richard Williams: This book is considered a classic in the field of animation
7. "Character Animation Crash Course!" by Eric Goldberg
8. "The Illusion of Life: Disney Animation" by Frank Thomas and Ollie Johnston
9. "Timing for Animation" by Harold Whitaker and John Halas

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

7. Animation Film Festivals
8. Animation Competitions
9. Online Communities and Forums
10. Getting the knowledge on the live experience
11. RVJ (Reflective Visual Journal) on the theory and particles

b) Suggested Co-Curricular Activities:

6. Oral presentations
7. Self-reflective blogs
8. Practical production works
9. Peers and self –assessment for output
10. Invited lectures and presentations on related topics

SEMESTER-I
COURSE 2: ANIMATION INDUSTRY PERSPECTIVES

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

7. Develop a compelling story, design and animate characters
8. Design and create a visually stunning visual effects sequence that could be used in a cinematic production
9. Create a short animated documentary that explores a real-life event,
10. Develop a pilot episode for a short animated series
11. Choose a scene from a live-action film or TV show and recreate the visual effects elements from scratch

SEMESTER-II
COURSE 3: BASIC DRAWING

Theory

Credits: 3

3 hrs/week

12. Course Objectives:

- Develop foundational drawing skills: The course aims to help students develop a solid foundation in drawing by teaching them fundamental techniques such as line work, shading, perspective, proportion, and composition.
- Enhance observation and perception skills: Through various exercises and activities, the course seeks to improve students' ability to observe and perceive details, shapes, forms, and textures in their surroundings.
- Learn and practice light and shadow techniques: Students will learn how to effectively use shading techniques to create depth, volume, and realistic forms in their drawings.
- Explore different drawing mediums: The course may introduce students to a range of drawing mediums such as graphite, charcoal, ink, and colored pencils.
- Develop perspective drawing skills: Students will learn the principles of perspective drawing, including one-point, two-point, and three-point perspective.

13. Learning Outcomes

Students at the successful completion of the course will be able to:

- Students will acquire a solid understanding of fundamental drawing techniques, including line work, shading, perspective, proportion, and composition.
- Students will develop their ability to observe and analyze their surroundings, paying attention to details, shapes, forms, and textures.
- Students will develop a strong understanding of how light interacts with objects and how to represent it in their drawings.
- Students will grasp the principles of perspective drawing and be able to create drawings that accurately represent three-dimensional space.
- Students will explore their creative potential and develop their unique artistic style.

14. Syllabus:

Unit - I: Sketching Materials: Gather essential sketching materials such as pencils (varying in hardness), erasers, sketching paper, and a sharpener. Experiment with different types of pencils to understand their range of values and textures.

Unit - II: Drawing Exercises and Prompts: Engage in regular drawing exercises and prompts to improve your skills and creativity. These can include timed sketches, drawing from memory, drawing using limited lines, or experimenting with different styles and techniques.

Unit - III: Lines and Contour Drawing: Learn about different types of lines and how to control their weight and direction. Practice contour drawing by observing objects or subjects and following their outlines with your eyes and pencil, without looking at your paper.

Unit - IV: Perspective: Study the fundamentals of perspective drawing to understand how objects appear in three-dimensional space. Learn about one-point, two-point, and three-point perspective and practice drawing simple objects and scenes using these principles.

Unit - V: Light and Shadow: Explore the concepts of light and shadow in drawing. Learn about different lighting techniques, shading, and rendering to create depth and dimension in your drawings. Practice observing how light falls on objects and replicate those effects in your sketches.

IV. References:

1. "Drawing on the Right Side of the Brain" by Betty Edwards - This book is a classic resource for beginners, focusing on teaching the fundamental skills of drawing, perception, and artistic expression
2. "Keys to Drawing" by Bert Dodson - This book covers a range of drawing techniques and exercises to help students develop their skills in line drawing, shape, shading, and composition.
3. "Drawing for the Absolute and Utter Beginner" by Claire Watson Garcia - A beginner-friendly guide that provides step-by-step instructions and exercises to help aspiring artists gain confidence in their drawing abilities.

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

15. Art Club: Start an art club at your school or join an existing one. This can be a platform for students to come together, share their drawings, collaborate on art projects, participate in group exhibitions, and organize art-related events or workshops.
16. Drawing Workshops: Organize or participate in drawing workshops conducted by professional artists or art educators.
17. Competitions and Exhibitions: Encourage students to participate in drawing competitions or art exhibitions. This can be at the school level, local art festivals, or regional/national events.
18. Art Contests and Challenges: Engage students in online art contests or drawing challenges that focus on specific themes or techniques.
19. Sketching Outings: Organize sketching outings to local parks, museums, historical sites, or nature reserves. This allows students to practice drawing from observation, explore different subjects, and engage with their surroundings. It also encourages a sense of community among fellow artists.

b) Suggested Co-Curricular Activities:

1. Training of students by a related field expert
2. Group discussions, Quiz, Debates, etc
3. Preparation of videos and PPT for the subject related presentations

4. Collection of material on the topics
5. Invited lectures and presentations on related topics

SEMESTER-II
COURSE 3: BASIC DRAWING

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. **Materials:** Gather the necessary drawing materials, such as pencils, erasers, drawing paper, and any additional preferred mediums (e.g., charcoal, ink, colored pencils).
2. **Warm-up Exercise:** Start with a warm-up exercise to loosen up your hand and practice drawing different types of lines. Experiment with straight lines, curved lines, dashed lines, thick lines, thin lines, and any other variations you can think of. Fill a page or two with these line exercises.
3. **Line Study:** Choose an object or scene with interesting shapes and contours. Using light pencil strokes, create an outline of the object, focusing on the various lines and contours that define its form. Pay attention to the direction and weight of the lines, as well as the negative spaces created by the object.
4. **Shape Exploration:** Select a few everyday objects around you (e.g., a mug, a book, a fruit). Instead of drawing detailed outlines, focus on capturing the basic shapes that make up the objects. Start by identifying the basic geometric shapes (circles, squares, triangles) and then add more complex shapes as needed.
5. **Still Life Drawing:** Set up a simple still life arrangement using objects of your choice. Arrange them in an interesting composition with varying shapes and sizes. Using your preferred drawing medium, create a detailed drawing of the still life, paying attention to the shapes, proportions, and relationships between the objects.

SEMESTER-II
COURSE 4: GRAPHIC DESIGN

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Students will learn to effectively communicate visually and create aesthetically pleasing designs.
- Students will gain a deep understanding of the design process from concept development to final execution
- Through hands-on projects and assignments, students will develop their own visual style and learn to effectively use elements like imagery
- Throughout the course, students will work on various design projects that will contribute to the development of their professional portfolio
- The course will provide guidance on creating a well-curated portfolio that showcases their skills and demonstrates their design abilities to potential employers or clients.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Understand and apply the principles of design, including composition, typography, color theory, and layout, to create visually appealing and effective designs.
- Generate creative ideas, conduct research, and develop design concepts that effectively communicate messages and solve visual communication problems.
- Apply design principles and techniques to different design mediums, including print, web, branding, advertising, and packaging,
- Analyze and critique design work, both their own and that of others, using design principles and effective visual communication techniques.
- Present design concepts and solutions effectively, both verbally and visually, to clients or stakeholders, articulating design choices and justifying design solutions.

III. Syllabus:

Unit - I: Overview of graphic design principles and concepts - History and evolution of graphic design - Introduction to design software and tools - Understanding the design process - Using grids and guides in design - Elements of brand identity (logo, colors, typography).

Unit - II: Introduction: Getting started with Photoshop - Document dimension – Working with selections - Drawing toolbar - Healing tool - Clone stamp tool - Status bar - Ruler - Grid - Working with Colors - Color mode - Resolution - Guide - Working with Layers - New layer - Delete layer - Working with quick mask - Applying filters - Adding and Manipulating type - Saving and printing images

Unit - III: Illustrator: Getting started with Illustrator - Interface – Workspace – Tools – Menus – Working with paths – Pathfinder – Paths - Live Paint - Compound Path - Working with Objects and Symbols – Clip Mask - Working with type - Text Wrap – Types of Tools - Gradient – Working with Layers - Logos - Tracing images – Drawing – Effects, Filters and Style - Hotkeys – Saving & Printing – Export and Import -

Save for web - Convert PDF

Unit - IV: In design: Getting started – Introduction the workspace – Tools & Menus – Working with panels - Working with styles – Working with graphics – Working with Layer - Flowing Text – Working with Typography - Creating Table

Unit - V: Creating a professional design portfolio - Selecting and curating work samples - Developing a personal brand as a designer - Presenting design work effectively - Sustainability in packaging design

IV. References:

10. Master Adobe Photoshop, Illustrator, Premiere and After Effects by Wiley- dreamtechIndia Pvt. Ltd.
11. Adobe InDesign CC Classroom in a Book – Pearson
12. Adobe InDesign CC Classroom in a Book (2017 release) 1st, Kindle Edition
13. Adobe Illustrator CC Classroom in a Book by Wood Brian (Author)
14. Adobe InDesign CS6 Classroom in a Book by Adobe Creative Team

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

20. Graphic assignments
21. Seminar/Workshop on Graphic design role in the industry
22. The student will demonstrate the graphic works with print
23. Visiting the Graphic design Studios/House for getting the knowledge on the live experience
24. RVJ (Reflective Visual Journal) on the theory and particles

b) Suggested Co-Curricular Activities:

11. Oral presentations
12. Self-reflective blogs
13. Practical production works
14. Peers and self –assessment for output
15. Invited lectures and presentations on related topics

SEMESTER-II
COURSE 4: GRAPHIC DESIGN

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

12. Create your visiting card
13. Digital Matte Paint
14. Convert Black and White to Color
15. Convert Day mode to Night mode
16. Design Image manipulation
17. Smooth skin and remove blemishes & scars
18. Create a 3D pop-out effect
19. Timeline Animation
20. Poster for a cultural event, movie, or music concert
6. Logo for a new startup or business

Adobe Illustrator:

1. Advertisement
2. Digital Illustrations
3. Brochure
4. Packet Design (Toothpaste packet, Soap cover, any Food product)
5. Menu cards
6. Calendar Design
7. Tracing image
8. Festival

Adobe In design:

1. Magazine A4 Size
2. Special Supplement
3. Different categories of Books
4. Corporate ID

SEMESTER-III
COURSE 5: 2D ANIMATION

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Introduction to 2D Animation: Provide an overview of the history, principles, and techniques of 2D animation, including keyframe animation, tweening, and frame-by-frame animation.
- Animation Principles and Techniques: Teach students the fundamental principles of animation, including timing, spacing, anticipation, follow-through, and exaggeration.
- Storytelling and Narrative: Explore the art of storytelling through animation. Teach students how to develop storyboards, create engaging narratives, and effectively communicate emotions and ideas through their animations.
- Build a Strong Portfolio: Create a diverse and high-quality portfolio that showcases your range of skills and abilities. Include various animation styles and demonstrate your storytelling capabilities.
- Industry Awareness and Professional Development: Familiarize students with the current trends, practices, and career opportunities in the animation industry.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Understanding of Animation Principles
- Proficiency in Animation Software
- Storytelling and Narrative Skills
- Character Design and Animation
- How to develop storyboards

III. Syllabus:

UNIT I: What is Animation- History of Animation (late 19th – early 20th century), Mid-20th century Animation, Golden Age of Animation, Digital Age and CGI Dominance, about traditional animation, Animation devices: phenakistoscope, Zoetrope, thaumatrope, Praxinoscope, flip book.

UNIT II: Adobe Animate: Interface and Workspace, panels, tools, and timelines, Drawing and Vector Art, Tools: Selection, Free Transform Tool, Brush Tool, Pencil Tool, Paint Bucket Tool, Text Tool, Bone Tool, Shape Tools, Deco Tool, 3D Transformation Tools, Bone and IK Tools, Layers, types of layers, frames, types of frames, time line bar, Onion Skin – FPS

UNIT III: Symbols, Graphics, Movie Clip & Button, Tweening, Types of Tweens, Object & Merge Drawings, Gradient Color, Color Effects, Filters, Shape Tween, Shape Hint Tween, About Mask, Layer Mask, Motion guide, Ease in and Ease out Animation, Working Frame - by - Frame Animations, Working on Tween Animation.

UNIT IV: Character creation: Character Model, Rigging, hierarchy of symbols, attaching bones and joints, Walk Cycle Animation, Facial Expressions and Lip Syncing, symbols or frame-by-frame animation to create realistic facial movements, synchronize the character's mouth with dialogue or sound.

UNIT V: Creating Background Scenes, Reference and Conceptualization, Layering and Depth, Drawing

and Painting Tools, Gradients and Shadows, Atmospheric Effects, Camera Movement, Idle and Secondary Animations, Adding Audio to Scene, Publish Movie, Publish Setting.

IV. References:

1. The Art of Stop motion animation: Ken A Priebe
2. Stop motion: Craft skills for model Animation: Susannah Shaw
3. Stop motion: Passion, Process and Performance: Barry JC Purves
4. Creating 3D Animation - The Aardaman Book of Film making: Peter Lord & Brian Sibley
5. Stop motion Armature Machining - A Construction Manual: Tom Brierton
6. A Century of Stop Motion Animation from Melies to Aardaman: Ray Harry Hausen
7. Stop motion Filming and Performance: Tom Brierton
8. Stop motion Puppet Sculpting: Tom Brierton

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Follow the given assignments
- Study tour for getting professional practice in industry-standard Stop Motion
- Students will give seminar on Oral presentation of the Stop Motion animation
- Conducting quiz program on the Stop Motion Animation
- Group Discussions on Stop Motion Animation

b) Suggested Co-Curricular Activities:

- Follow the given assignments
- Study tour for getting professional practice in industry-standard Stop Motion
- Students will give seminar on Oral presentation of the Stop Motion animation
- Conducting quiz program on the Stop Motion Animation
- Group Discussions on Stop Motion Animation

SEMESTER-III
COURSE 5: 2D ANIMATION

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Domain specific quiz
2. Practical production work on Stop Motion animation
3. Presentations on outputs
4. Character Walk Cycle.

SEMESTER-III
COURSE 6: STORY TO SCRIPT

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Practice script development and revision through practical exercises.
- Gain knowledge of the film industry landscape, market trends, and career opportunities.
- Foster creativity and originality in scriptwriting.
- Enhance presentation and pitching skills for film projects.
- Cultivate a professional work ethic in the scriptwriting process.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Understand the fundamentals of storytelling and its application in film.
- Learn the techniques and conventions of scriptwriting for film.
- Analyze and deconstruct narratives in films to understand their structure and storytelling devices.
- Explore different genres and formats in film storytelling.
- Collaborate effectively with directors, producers, and other members of the creative team.

III. Syllabus:

Unit – I: Overview of the importance of storytelling in film - Elements of a compelling film story - introduction to narrative structure and plot development - Exploration of different film genres and their storytelling conventions - Analysis of films from various genres

Unit – II: Techniques for creating memorable and compelling characters - Examining character arcs and motivations in films - Analysis of narrative structures in films (e.g., three-act structure, nonlinear storytelling) - Understanding plot points and turning points

Unit – III: Production Pipeline - Introduction to Storyboard - The difference between storyboard and Comic book - Anatomy of a Storyboard - Thumbnail Storyboard - Preparing Storyboards using Digital software - Transitions, Aspects of the storyboard – Understanding the scene and emotion – Matching with the layout - Animatics

Unit – IV: Study of effective dialogue writing for - Exercises in writing dialogue-driven scenes - techniques for visually conveying story and emotion on screen - Breaking down scenes and understanding their purpose

Unit - V: Advanced Genre Studies: Thriller, Comedy, Drama, Sci-Fi, etc. - Advanced Visual Storytelling: Cinematography, Visual Effects, etc. - Writing for Serialized Television and Web Content - Advanced Script Development and Project Planning - Production Planning and Budgeting

IV. References:

1. "Story: Substance, Structure, Style, and the Principles of Screenwriting" by Robert McKee
2. "Save the Cat! The Last Book on Screenwriting You'll Ever Need" by Blake Snyder
3. "The Anatomy of Story: 22 Steps to Becoming a Master Storyteller" by John Truby
4. "Screenplay: The Foundations of Screenwriting" by Syd Field

5. "Writing Movies for Fun and Profit: How We Made a Billion Dollars at the Box Office and You Can, Too!" by Robert Ben Garant and Thomas Lennon

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

1. Organize workshops or guest lectures by experienced screenwriters who can share their knowledge, insights, and techniques related to story to script conversion
2. Conduct scriptwriting competitions where students can submit their original scripts
3. Organize film screenings of popular movies or short films followed by discussions and analysis
4. Arrange script readings where students can present their scripts to a group of their peers
5. RVJ (Reflective Visual Journal) on the theory and particles

b) Suggested Co-Curricular Activities:

- Oral presentations
- Self-reflective blogs
- Practical production works
- Peers and self –assessment for output
- Invited lectures and presentations on related topics

SEMESTER-III
COURSE 6: STORY TO SCRIPT

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Assign students the task of adapting a short story, novel, or real-life event into a screenplay.
2. Provide students with a selection of scenes from existing films and ask them to analyze the original screenplay and compare it to the final on-screen version
3. Give students a scene without any dialogue and ask them to write the dialogue based on the character's personalities, motivations, and the situation
4. Assign students the task of creating original characters and developing their backstories, motivations, and character arcs
5. Ask students to develop a pitch for a new film or TV series. They should prepare a presentation that includes a logline, character descriptions, and a brief outline of the story

SEMESTER-III

COURSE 7: STOP MOTION ANIMATION

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Students will gain a thorough understanding of the principles and techniques used in stop motion animation.
- Students will learn how to effectively develop narratives and stories using stop motion techniques.
- Puppet Design and Animation: Students will learn the process of designing and creating puppets for stop motion animation
- Students will learn the basics of post-production and editing for stop motion animation.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- This course will help students enhance outcomes beyond just creative and artistic expression.
- This is an introductory course in stop-motion animation, a medium that requires a wide array of technical skills
- Stop motion animation is a powerful animation technique that makes static objects appears to be moving.
- Stop motion animation draws attention to placement, framing, direction and speed of movement.
- Excellent platform to study composition and experiment with the art of storytelling.

III.Syllabus:

Unit - I: Stop-motion basic technique, Mix equal parts digital camera, computer and imagination. Introduction to many ways to go about shooting, editing and finalizing a stop-motion short film.

Unit - II: Puppet/clay animation: Types of puppets: Simple clay models, Toys, Simple wire and Plasticine puppets and clothed puppets, Preparation of models, Coloring, Puppet costumes.

Unit - III: Cutout Animation: Create Objects and Characters using cut pieces, animate in adobe animate, Study of Time Lapse and Pixilation, Project works in Time lapse and Study on Pixilation, Pixilation techniques,

Unit - IV: History of stop motion techniques, Study of famous stop motion works and studios, General workflow of stop motion animation, Script, Storyboard, Character design, set design, Props creation for stop motion animation. Shooting technique: Camera, Tripods, Lighting, Data storage and editing software.

Unit - V: Stop Motion in Adobe Animate: Plan your animation, Create or import your assets, Set up your stage, Create a symbol for each element, onion skinning, Start animating frame by frame, Fine-tune timing and spacing, Add sound effects or music, Preview and refine your animation, Export Animation, Import to after Effects, Adding Video Effects, Export to video format.

IV. References:

1. The Art of Stop motion animation: Ken A Priebe

2. Stop motion: Craft skills for model Animation: Susannah Shaw
3. Stop motion: Passion, Process and Performance: Barry JC Purves
4. Creating 3D Animation - The Aardaman Book of Film making: Peter Lord & Brian Sibley
5. Stop motion Armature Machining - A Construction Manual: Tom Brierton
6. A Century of Stop Motion Animation from Melies to Aardaman: Ray Harry Hausen
7. Stop motion Filming and Performance: Tom Brierton
8. Stop motion Puppet Sculpting: Tom Brierton

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Follow the given assignments
- Study tour for getting professional practice in industry-standard Stop Motion
- Students will give seminar on Oral presentation of the Stop Motion animation
- Conducting quiz program on the Stop Motion Animation
- Group Discussions on Stop Motion Animation

b) Suggested Co-Curricular Activities:

- Follow the given assignments
- Study tour for getting professional practice in industry-standard Stop Motion
- Students will give seminar on Oral presentation of the Stop Motion animation
- Conducting quiz program on the Stop Motion Animation
- Group Discussions on Stop Motion Animation

SEMESTER-III

COURSE 7: STOP MOTION ANIMATION

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Object Transformation
- Storytelling through Objects
- Experimental Techniques
- Music Video with Clay Animation
- Environmental Awareness using Paper Animation

SEMESTER-III

COURSE 8: FILM STUDIES

Theory

Credits: 3

3 hrs/week

Course Objectives:

- Film studies courses aim to cultivate critical thinking skills by encouraging students to analyze and interpret films
- Film studies courses often explore the historical development of cinema, from the early silent era to contemporary films
- Film is not only a form of entertainment but also a reflection of social, cultural, and political contexts
- Film studies courses encourage students to explore their own creativity and express their ideas through the medium of film
- Film studies courses require students to conduct research on films, filmmakers, historical contexts, and critical theories

Learning Outcomes

Students at the successful completion of the course will be able to:

- Students will gain a comprehensive understanding of the historical development of cinema, including significant movements, genres, and influential filmmakers
- Students will develop the ability to critically analyze and interpret films
- Analyze and deconstruct narratives in films to understand their structure and storytelling devices.
- Explore different genres and formats in film storytelling.
- Collaborate effectively with directors, producers, and other members of the creative team.

Syllabus:

Unit – I: Introduction to Digital film making, Early history of film, what is a movie, how do we analyze it, form and narrative, Mise-En-Scene and design, Acting and Performance, Different genres in cinema, Documentary non-fiction, various categories PSA's, Documentaries, Commercials,

Unit –II: Role of the cinematographer, Screen clips & short film, Composition & Framing, Frame size terminology, Lens Choice, Exposure/F-Stop/Shutter/ISO Depth of field Camera operating

Unit –III: Cinematography and photography,. Camera quiz, Video terms, Shot list, continuity, angling the camera, point of view, camera techniques, lighting, framing the shot, the elements of composition, video camera basics

Unit –IV: Cinematographic properties – Basic shot terminology: Close up, Mid shot, Long shot, Big close up, Mid-long shot, Extreme long shot, Point of view (POV) shot, Over-the-Shoulder(OTS) shot, high angle and low angle shot, top angle shot.

Unit –V: Introduction to the concept of Imaginary line (180); matching of action, direction of the movement and look. Reverse angle. Operations and movements-Pan, tilt, trolley, dolly, crane, steady – cam. Different film Formats (16 mm, 35 mm, 70 mm) and aspect ratios. The bridge between films, phand

art. Introduction to Photography, History of camera, Types of camera, Principal of photography, Parts of still camera: aperture, shutter speed, lens, filters and flash, Camera films

References:

1. "Film Art: An Introduction" by David Bordwell and Kristin Thompson
2. "The Oxford History of World Cinema" edited by Geoffrey Nowell-Smith
3. "Film Theory and Criticism: Introductory Readings" edited by Leo Braudy and Marshall Cohen
4. "A Short History of Film" by Wheeler Winston Dixon and Gwendolyn Audrey Foster
5. "Understanding Movies" by Louis Giannetti

Web resources suggested by the Teacher concerned and the college Librarian including reading material

Co-Curricular Activities:

- Get involved in student film productions as an actor, director, cinematographer, or any other role that interests you
- Organize film screenings and discussions in your community or on your campus
- Start a film blog or contribute to existing film publications. Writing film reviews, analysis, and essays can sharpen your critical thinking and communication skills while allowing you to articulate your thoughts on films
- Look out for film-related workshops, seminars, and guest lecturers in your area
- RVJ (Reflective Visual Journal) on the theory and particles

Suggested Co-Curricular Activities:

- Oral presentations
- Self-reflective blogs
- Practical production works
- Peers and self –assessment for output
- Invited lectures and presentations on related topics

SEMESTER-III

COURSE 8: FILM STUDIES

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Camera: Operation, Composition, Movement,
2. Preparation of script: Fiction (or) non-fiction (or) Comedy (or) Horror (or) Drama
3. Shooting of the script in video.
4. Different camera movements: pan, tilt, track, and trolley
5. Difference of track in/out, zoom in/out
6. Shooting a short silent short film

SEMESTER-IV

COURSE 9: INTRODUCTION TO 3D

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Understand the virtual 3D space and how to build objects
- Create objects using primitive shapes and sub patch geometry
- Analyse the importance of file backup and management(projects setup)
- Evaluate the projects and assignments developed/prepared by the students

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Equip with the basic knowledge of Autodesk Maya
- Getting sufficient knowledge for doing simple 3D project
- Develop the skill of overall 3D workflow
- Understanding the use of lights
- Learn how to render 3D objects

III.Syllabus:

UNIT I: Introduction on Modelling , Fundamentals of modelling, Introduction to the interface of Maya, Menu set, Main Menu Bar, Panel Menu, The Channel Box and Layer Editor, Shelf, Creating New Shelf , Hotkeys, Viewport, Attribute Editor, Hot Box, Setting and Preferences, New, Set Project, modelling by basic geometrical primitives, Duplicating objects , Outline.

UNIT II: Import Images, viewport references, Model using Reference images, basic posture, Props Modelling, NURBS, CV, EP, Bezier, Pencil Curve tools, Mesh Conversion, Polygon to Nurbs, Nurbs to polygon, High poly, Low Poly, Difference between hi- poly & low-poly characters.

UNIT III: Explanation of Material Editor and Applying Materials, Introduction to basic material types & Procedurals, Study of concepts: Opacity, Transparency, Secularity and colour, Working with Transparency, Reflection & Refraction, Bump & Displacement Maps, Explanation of Textures and UVW Mapping. Texture mapping, Wrapping of texture on a 2D surface.

UNIT IV: Lighting, Working with Arnold Lights 1-Point, Direct, Spot, Working with Maya Lights 2-Ambient, Area and Volume, Direct Illumination and Illuminating a Stage Show, Three Point Lighting and Exterior Lighting, Cast shadows, decay rate, Previewing lighting and shadows creating depth map Shadow, creating ray-traced

UNIT V: Concept of a lighting system and shadows, Creating area light shadows, setting area light visibility, Creating soft shadows with spotlights, rendering an AVI, Rendering an image sequence. Render layers: introduction, creating, Applying to render layer presets, setting overrides, creating render layer composites, Render Passes: Introduction, compare render passes and render layers, Render quality: anti-aliasing, setting colour profiles, diagnosing ray tracing.

IV.References:

- Peter Ratner-3D Human Modelling and Animation
- 3D Modelling and Printing with Tinkercad: Create and Print - Book by James Floyd Kelly
- Integrating 3D Modelling, Photogrammetry - Book by David Halbstein and Shaun Foster
- D Automotive Modelling: An Insider's Guide to 3D Car - Book by Andrew Gahan

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Presentation on Modeling, Texturing Rendering, and popular work flow
- Demonstrate or Exhibit(museum) developed projects
- Group discussion on 2D, & 3D objects
- Study tour or Visit to production house to get knowledge on the 3D pipeline
- Exhibit on the external and internal models with a team project

b) Suggested Co-Curricular Activities:

- Written assignment
- Self-directed study with peers and tutors
- Evidence of process and experimentation in response of animation

SEMESTER-IV

COURSE 9: INTRODUCTION TO 3D

Practical

Credits: 1

2 hrs/week

V. List of Experiments:

- Create any Model some objects such as chairs, tables, fruits, utensils
- Create any Model instruments, tools
- Apply basic material and shader types & Procedurals textures.
- Unwrap the models of objects and characters using various projection maps.
- Apply texture on various objects and characters.
- Create Opacity, Smoothness, Secularity, and color maps, Transparency, Reflection
- Bump & Displacement Maps
- Render a frame and video of indoor and outdoor scenes.
- Render a video of indoor scenes.

SEMESTER-IV

COURSE 10: COMPOSITING - I

Theory

Credits: 3

3 hrs/week

VI. Course Objectives:

- Understand the fundamental concepts of compositing and its role in visual effects and motion graphics.
- Navigate and utilize the After Effects interface effectively.
- Import and organize footage, create compositions, and set up project settings for compositing.
- Apply various masking techniques to isolate and manipulate objects within a composition.
- Track and matchmove objects using After Effects' built-in tracking tools

VII. Learning Outcomes

Students at the successful completion of the course will be able to:

- Analyze and awareness of computer graphics software
- Understand and recognize the different techniques in the VFX
- Create a drawing using motion graphics techniques
- Evaluate the own assignment
- Demonstrate the assignments

VIII. Syllabus:

UNIT I: Introduction to layer-based software – Workspace and panels – Timeline panel – Working with composition settings – Importing and interpreting video and audio – Frame rate – Pixel aspect ratio and frame aspect ratio – Preparing and importing – Layers and properties – Selecting and arranging layers – Null object layers – 3D layer

UNIT II: Cameras – Lights – Points of interest – Animation and keyframes - Keyframe interpolation – Controlling speed – Animating with puppet tools – Time stretching and time remapping – Paint tools: Brush, Clone Stamp, and Eraser – Shapes and Mask

UNIT III: Creating Text – Editing text layers – Animating text - Alpha channels – Masks – Mattes – Keying – Roto Brush - Refine matte – Motion graphics – Blur – Sharpen – Channel effects

UNIT IV: Color Correction effects – Time remapping – 3D Camera tracking – Transparency – Compositing - Effects – 4-Color gradient effects – fill effects – Fractal effect – Ramp effects – paint bucket effects – Lens flare effect – Vegas effects – write-on effect – Drop shadow effects – Shatter effects – cc effects

UNIT V: Rig removal - Morphing - XMP metadata – Expression basics – Transition – Compositions – Tracking and stabilizing – Audio effects – Audio transition – Rendering and exporting – Exporting still images – Exporting Image sequences

IX. References:

- The Art and Science of Digital Compositing Book by Ron Brinkmann
- Compositing Visual Effects: Essentials for the Aspiring Artist Book by Steve Wright

- Digital Compositing in Depth! Book by Doug Kelly
- Adobe After Effects CS6 Classroom in a Book by Adobe Creative Team (Author)

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Workshop/Seminar on motion graphics
- Work on the given assignments
- The individual shooting of your original footage for the demo reel
- Visit the Chroma studio to shoot green/blue screen footage
- RVJ (Reflective Visual Journal) on the theory and particles

b) Suggested Co-Curricular Activities:

- Oral presentations
- Self-reflective blogs
- Practical production works
- Peers and self –assessment for output
- Invited lectures and presentations on related topics

SEMESTER-IV

COURSE 10: COMPOSITING - I

Practical

Credits: 1

2 hrs/week

X. List of Experiments:

- Rotoscopy
- Keying (Green/Blue screen shooting and compositing)
- Color Correction
- Tracking and Stabilizing
- Day to Night convert
- Wire or Rig Removals
- Motion poster design
- Title animation with write on
- Info-graphic and Motion graphic using with the effects

SEMESTER-IV

COURSE 11: GAME DESIGN

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Understand the core principles
- Apply design principles
- Create functional designs
- Develop critical thinking skills
- Use design software/tools

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Understand the fundamental design principles.
- Apply design principles to solve design
- Develop critical thinking skills
- Create visually appealing designs.
- Knowledge of Testing Tools and Technologies

III. Syllabus:

Unit - I: Introduction to the game, History of Physical game, Ideas for games, Developing the game, Game pipeline, Agile Game System, Game Platform, Game Physics, Game engines, Type of Game Engines, Game Design Documentation, Bugs in game, Game Physics, game mechanics, Game Aesthetics.

Unit - II: Photoshop for Game: Character Design, Environment Design, Tools: Dodge, burn, smudge, shape tools, Sprite Creation, importing to unity, working on sprites, User Interface Design, Concept Art, Asset making.

Unit - III: Unity Interface, tools, panels: hierarchy, inspector, scene, game, animator panel, Assets, sprites, textures in unity, main camera, linking unity with visual studios, scripts, importing 2d objects to unity, creating sprites, working on button, text editors, sliders, materials, game objects, empty game object.

Unit - IV: Working on scripts using c#, Rigid body, colliders, types of colliders, edit collider, prefabs, creating sprites, controlling a game object, moving, rotating, and scaling game objects, Player Control and Input, Character movement and navigation, Scripting Animation, health bar.

Unit - V: Add background music, sound effects, and voice-overs, such as particle systems, shaders, and post-processing effects. Playtest the game to identify and fix bugs, glitches, and gameplay issues. Fine-tune gameplay elements, balancing, and difficulty levels. Build the game for the target platform Package the game into an executable or app format.

IV. References:

- "Unity in Action: Multiplatform Game Development in C#" by Joe Hocking:

- "Unity Game Development Cookbook" by Paris Buttfield-Addison, Jon Manning, and Tim Nugent:

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Establish a game development club or group where students can collaborate and work on game projects using Unity.
- Conduct workshops or training sessions on Unity game development, covering topics such as scripting, level design, animation, and optimization.
- Participate in game design competitions where students can submit their Unity games and showcase their creativity and technical skills.
- Focus on mobile game development using Unity.
- Provide guidance and support as they work through the materials.

b) Suggested Co-Curricular Activities:

- Game design
- Game concepts
- Mobile game design and development.
- Game Showcases and Exhibitions
- Game Development Clubs or Organizations

SEMESTER-IV

COURSE 11: Game Design Lab

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Game Concept and Design
- Character Design and Animation
- Level Design and Asset Creation
- Testing and Polishing
- Game Mechanics Prototype

SEMESTER-V

COURSE 12: ADVANCED 3D

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Understand the origins of 3D Animation practice
- Learn fundamental principles of 3D animation
- Analyse the development in the 3D production
- Create the Artefacts appropriate for each stage of the pipeline

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Students at the successful completion of the course will be able to:
- Hands-on experience on the processes
- Tools
- Techniques
- stages of production inherent in the 3D industry

III. Syllabus:

UNIT I: Introduction to bone system/Joints and IK handles - Creating bone system and maintaining naming conventions - Skinning types - Import and export of skin weights - IK and FK basics - IK and FK switch - Introduction to Deformers - Introduction to constraints and implementation to rig - Maintaining proper hierarchy - Grouping and creating controls - Rigging the characters - Use of deformers in the rigging process.

UNIT II: Brief about animation principles - Animation tools in 3D - Applying classical 2D animation techniques - Stretch squash for the 3D character - Creating the illusion of weight - Overview of Maya - Playback controls and Exploring Maya animation preferences - Details about graph editor - Bouncing Ball Exercise - Body language - Animating object along a motion path - Utilizing the tracks-editor to blend animation clips - Controlling attributes with set driven keys - Animating with constraints.

UNIT III: Key framing – Graph editor – Set the beginning and ending keys – Keys to make a ball bounce – Speed up the animation – Tune the animation curve – Set driven key – Playback range and create the objects – Examine the driven key – Path animation – Raise the train above the path – Trax Editor – Character set – Motion with a new clip

UNIT IV: Previewing animations in real-time with play blasts, Introduction to scene animation and key framing, dope sheet. Animal walk& run cycles, snakes, and birds. Biped Character walk cycles, Biped Character run cycles, pushing and pulling objects. Facial animation and lip-sync. Nonlinear Animation with Trax editor. Working with character sets and clips. character interactions.

UNIT V: Rendering Overview, what is rendering, How Maya renders Shader Networks, Shading Groups, Materials, Lights, Maya architecture, Nodes and Attributes, Hyper graph, IPR (Interactive Photorealistic Rendering), V-Ray techniques.

IV. References:

- Character Emotion in 2D and 3D Animation Book by Les Pardew
- Introducing Character Animation with Blender Book by Tony Mullen
- Mastering 3D Animation Book by Peter Ratner
- The Art of 3D Computer Animation and Effects Book by Isaac Victor Kerlow
- 3D Animation Essentials Book by Andy Beane

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Follow the given assignments
- Study tour for getting professional practice in industry-standard 3D Softwares
- Students will give seminar on Oral presentation of the animation
- Conducting quiz program on the 3D
- Group discussions on 3D Pipeline

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-V

COURSE 12: ADVANCED 3D

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Character Acting
- Creature Animation
- Lip Sync and Dialogue
- Advanced Rigging
- Physical-Based Animation

SEMESTER-V

COURSE 13: COMPOSITING - II

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Explore advanced compositing techniques such as multi-layer blending, masking, and integration of complex elements into a scene.
- Learn the art of digital matte painting to create realistic and detailed backgrounds for composites.
- Master the techniques of working with green screen footage and rotoscoping to seamlessly integrate subjects into various backgrounds.
- Dive deeper into masking and selection tools, including channel-based selections, advanced edge refinement, and precise control over complex subjects.
- Learn how to integrate 3D elements into 2D composites, including matching lighting, shadows, and perspectives for a cohesive final image.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Analyze various techniques for realistic effects
- Create and Recognize the different techniques in the VFX
- Understand the shooting techniques in visual effects sequences
- Apply the filters and effects to get photorealistic
- Acquire a high level of expertise in advanced compositing techniques, allowing you to create visually stunning and seamless composites.

III. Syllabus:

UNIT I:

Introduction to the interface – Introduction to the flow editor – Working with polylines – Working with effect masks – working with motion paths – Working with grid warp deformations – particles – 3D interface – working with auxiliary channels – Stereoscopic and optical flow - Previews and Final renders.

UNIT II:

Induction to node software – Understanding the workflow – Toolbar – Menu bar – Properties panels – Project Settings - Read & Write nodes – Node software file name variables - File formats - Color space in node software - Color space LUT & viewer LUT - Reformat Animation Parameters – Curve Editor – Keying – Working with paint and rotoscoping – Color and Rotoscoping - 3D integration – Warping and Morphing Images – Tracking – Stabilizing – Image-based keying - Renders.

UNIT III:

User interface – Project – Sessions – Using the timeline – Adding note – Curve Editor – Nodes – Roto – Motion Blur – Paint – Clone Brush - Power Matte – Closed shape method – Blue/Green screen keying – zMatte – Pin Based warping – Shape-based warping - Morphing – Inverse Kinematics – Planar Tracker – Point Tracker – Offset Tracking – Modifying Tracking Data – Stereo paint – Rendering

UNIT IV:

Planar tracking - the lynchpin to mocha. Fast mask creation, inserts, and even 3D camera tracking are impossible without solid tracking data. Tougher tracks, Stabilization, Skin retouch, Camera Tracking Roto tips & tricks in mocha, 3D camera solve, Removing lens flare, Techniques for removal, and background patching.

UNIT V:

The user interface, project overview, shot overview, 3d perspective, an orthographic view, Useful Keys, Menus, tracking menu, camera menu, Import footage, Tracking Parameters, Color key, Clean Auto Feature Tracks, Survey Data, Camera Parameters, Solver Controls, Lens distortion, Depth Map, Importing footage, Footage format, footage properties, camera parameters, Auto feature tracking, Tracking length graph(Track-L), Tracking Error Graph(Track – E), Editing feature track F- Curves, creating masks, tracking masks, image masks, solving camera motion, constraints, survey data.

IV. References:

1. Nuke 101: Professional Compositing and Visual Effects Book by Ron Gambar
2. Digital Compositing with Nuke by Lee Lanier (Author)
3. The VES Handbook of Visual Effects: Industry Standard VFX Practices and Procedures by Susan Zwerman (Editor), Jeffrey A. Okun (Editor)
4. The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics (The Morgan Kaufmann Series in Computer Graphics) by Ron Brinkmann (Author)

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Workshop/Seminar on VFX techniques and projects
- Assignments on compositing
- Study tour for the Outdoor and Indoor shooting to collecting own footage for VFX
- RVJ (Reflective Visual Journal)

b) Suggested Co-Curricular Activities:

- Training of students by related field experts.
- Skill Development through Group discussions, Quiz, Debates, etc
- Preparation of videos and PPT's for the subject related presentations
- Collection of material on the topics using Internet
- Invited lectures and presentations on related topics

SEMESTER-V

COURSE 13: COMPOSITING - II

Practical

Credits: 3

3 hrs/week

VI. List of Experiments:

1. Working with nodes
2. Working with Chrome Keying
3. Working on Rotoscoping
4. Human Rotoscoping
5. Animal Rotoscoping
6. Object adding or removing with the Paint
7. Day to night converting + Color Correction
8. 3D Compositing in live-action short
9. Working with Hair Rotoscoping
10. Tracking and Stabilizing

SEMESTER-V

COURSE 14: WEB PUBLICATION

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Understand the basic structure of HTML documents. Learn HTML tags, attributes, and elements.
- Learn to create well-structured web pages using HTML.
- Understand CSS selectors, classes, and IDs to target specific elements.
- Familiarize with the Word Press dashboard and its various features.
- Understand the concept of templates and how to create custom templates for different sections of a website.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Demonstrate a thorough understanding of HTML syntax, tags, and elements.
- Apply CSS styles to HTML elements to control the layout, typography, and visual appearance of web pages.
- Implement responsive web design techniques using HTML and CSS to create websites that adapt to different screen sizes and devices.
- Install, set up, and configure WordPress on a web server.
- Customize the visual appearance of a WordPress website by installing and modifying themes.

III. Syllabus:

Unit - I: Introduction to HTML: What is HTML and its role in web development, Understanding HTML tags, elements, and attributes. HTML document structure and basic syntax. HTML Text Formatting: Heading tags, paragraphs, and line breaks

Unit - II: HTML Tables: Formatting tables with attributes such as rowspan, colspan, and alignment. Adding headers, captions, and summaries to tables. HTML Forms: Input elements for text, checkboxes, radio buttons, and dropdown menus. Form validation and handling form submissions.

Unit - III: Introduction to WordPress: Overview of WordPress as a content management system (CMS). Installation and setup of WordPress on a web server. Understanding the WordPress dashboard and user roles. WordPress Themes: Exploring the concept of themes in WordPress. Installing and activating themes.

Unit - IV: Customizing themes using the WordPress Customizer and theme settings. Creating and Managing Content: Creating and editing posts, pages, and custom post types. Organizing content using categories and tags. Using the media library to manage images, videos, and other media files.

Unit - V: Plugins and Functionality: Introduction to WordPress plugins and their role in extending functionality. Installing and activating plugins. Popular plugins for contact forms, SEO, social media integration, etc. Customizing WordPress: Using the WordPress Customizer to modify the appearance of a website. Customizing headers, menus, widgets, and sidebars. Introduction to child themes for advanced customization. WordPress Security and Maintenance: Best practices for securing WordPress websites.

IV. References:

- "HTML and CSS: Design and Build Websites" by Jon Duckett
- "HTML5: The Missing Manual" by Matthew MacDonald
- "HTML and CSS: Visual QuickStart Guide" by Elizabeth Castro and Bruce Hyslop
- "Professional WordPress: Design and Development" by Brad Williams, David Damstra, and Hal Stern
- "WordPress for Dummies" by Lisa Sabin-Wilson

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Organize workshops where students can learn HTML and WordPress hands-on.
- Conduct web design competitions where students can showcase their HTML and WordPress skills.
- Encourage them to work on personal projects or contribute to community initiatives.
- This helps students refine their skills, exchange ideas, and learn from each other's work.
- This practical experience allows students to apply their skills, troubleshoot issues, and gain real-world exposure.

b) Suggested Co-Curricular Activities:

- Training of students by a related field expert
- Group discussions, Quiz, Debates, etc
- Preparation of videos and PPT for the subject related presentations
- Collection of material on the topics
- Invited lectures and presentations on related topics

SEMESTER-V

COURSE 14: WEB PUBLICATION

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Create an HTML file for the homepage of your blog website.
- Create a separate CSS file and link it to your HTML file..
- Install WordPress on a local server or web hosting environment.
- Customize the appearance of your WordPress theme to match the design of your HTML website.
- Write and publish at least three blog posts on topics of your choice.

SEMESTER-V

COURSE 15: DIGITAL FILM EDITING

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Effectively use digital editing software and tools to manipulate and arrange video and audio elements.
- Apply fundamental editing techniques to create a cohesive and engaging narrative structure.
- Demonstrate proficiency in advanced editing techniques, such as multi-camera editing, color grading, and visual effects.
- Understand the principles of sound design and integrate high-quality audio into film projects.
- Collaborate effectively with directors and other team members to bring the vision of a project to life.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Understanding the principles of editing:
- Mastery of editing tools
- Knowledge of sound design.
- Creativity
- Collaboration

III. Syllabus:

Unit - I: History of Film Editing: The Silent Period, the early sound film, the influence of the documentary, the influence of the popular arts, Editors who became directors, Experiments in Editing (Alfred Hitchcock).

Unit - II: New Technologies, International advances, the influence of television and theater, New challenges to filmic narrative conventions, changes in pace, Imitation and Innovation, Digital Reality

Unit - III: Editing for the genre, Action, Dialogue, Comedy, Documentary, Imaginative Documentary, Principles of editing, the picture editing and continuity, the picture edit and pace, Nonlinear Editing and Digital technology

Unit - IV: The History of Compositing, the history of optical technique, Film versus digital, compositing of live-action elements, after the shoot, extractions and the magic bullet, rotoscoping, Scene Tracking, Matte painting,

Unit - V: Setting up a color correction environment, Primary contrast adjustments, HSL qualification and HUE curves, Hue curve adjustments, HSL adjustments, Shapes, Shapes and Motion, animating grades, Correcting Hue Shifts, Memory Colors, Skin Tone, Skies and Foliage, Shot Matching and Scene Balancing, Broad cast safe

IV. References:

1. "The technique of film and video editing history, theory, and practice fourth edition ken dancyger

2. The Technique of Film Editing Second Edition Written and compiled by Karel Reisz and Gavin Millar
3. COLOR CORRECTION HANDBOOK Professional Techniques for Video and Cinema Alexis Van Hurkman
4. "Avid Editing: A Guide for Beginning and Intermediate Users" by Sam Kauffmann and Ashley Kennedy
5. "The Sound Effects Bible: How to Create and Record Hollywood Style Sound Effects" by RicViers
6. "Adobe Premiere Pro CC Classroom in a Book" by Maxim Jago
7. "The VFX Reference Platform: A Reference Platform for Shared Professional VFX and Animation Workflows" by The Visual Effects Society (VES)

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Workshop: Organize an editing and compositing workshop where students can learn new techniques from professionals in the industry.
- Independent Film Project: Encourage students to create their own short film project where they can practice their editing and compositing skills.
- Online Course: Create an online course on editing and compositing techniques, using video tutorials, interactive quizzes, and assessments to help students learn at their own pace.
- Film Analysis: Encourage students to analyze and critique the editing and compositing techniques used in films, and present their findings to the class.
- Guest Speakers: Invite professionals in the industry to speak to the class about their experience in film editing and compositing, and share their knowledge and tips with students.

b) Suggested Co-Curricular Activities:

- Training of students by a related field expert
- Group discussions, Quiz, Debates, etc
- Preparation of videos and PPT for the subject related presentations
- Collection of material on the topics
- Invited lectures and presentations on related topics

SEMESTER-V

COURSE 15: DIGITAL FILM EDITING

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Choose a short film project to work on.
2. Using industry-standard editing software,
3. Add sound design to create a mood, establish a sense of place, and enhance the emotional impact of the footage.
4. Use compositing techniques to integrate different elements of the scene.
5. Export the final video and submit it to the instructor for review.

SEMESTER-VII

COURSE 16: E LEARNING

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Learners with new knowledge and information related to a specific subject or topic.
- Develop practical skills that can be applied in real-world situations.
- Opportunities for learners to practice and refine their skills through interactive exercises, simulations, or case studies.
- Critical thinking abilities, enabling them to analyze, evaluate, and solve problems effectively.
- The course aims to enhance learners' decision-making or problem-solving abilities.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Knowledge Acquisition
- Skill Development
- Critical Thinking and Problem-Solving
- Application of Knowledge
- Evaluation and Reflection

III. Syllabus:

Unit - I: Online Frame Work - Types of E - learning's - ADDIE model for E-learning : Analysis, Design, Development, Implementation, Evaluation. Action Script, Interface of Action Script in animate, Uses of Action Script, Event Handling, Using Code Snippets.

Unit – II: AS: Drag & Drop, Moving with Keyboard Arrows, Go to Frame and Stop, Play & Stop Sound Layout Creation - Timeline Actions- Creating Frame- Action Controlling Sound -Sound Controls– Video Controls- Handling Components.

Unit - III: Action Script on Buttons, Movie Clips, Event Handlers, Create a Slide Show, Creating an Interactive Flash Game, Flash File Publishing, Export Options, Publish Settings from Animate to After Effects Working on Adobe After Effects, Export animate to After Effects, Create Character Animation in After Effects, Export to Movie Format, Test Movie.

Unit - IV: Introduction to After Effects, interface and workspace, Animation Techniques, Creating key frame animations, Applying easing and motion blur, parenting and expressions to create complex motion behaviours, Creating interactive elements using Essential Graphics panel, Building interactive buttons, menus, or navigation controls.

Unit - V: Exporting e-learning projects, optimizing video, animation settings for web or mobile delivery, e-learning projects within After Effects, Exporting Animate files to After Effects, adding sounds, Export to video.

IV. References:

- "Foundation ActionScript 3.0 Animation: Making Things Move!" by Keith Peters
- Learning ActionScript 3.0: A Beginner's Guide" by Rich Shupe and Zevan Rosser

- Motion Graphics for E-Learning" by Amy Balliett
- Creating Motion Graphics with After Effects: Essential and Advanced Techniques" by Chris Meyer and Trish Meyer

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Virtual Debates
- Online Competitions
- Virtual Exhibitions and Showcases
- Online Cultural Events
- Webinars and Virtual Conferences

b) Suggested Co-Curricular Activities:

- Virtual Debates and Discussions
- Collaborative Online Projects
- Online Competitions and Challenges
- Online Personal Development Courses
- Arts and Creative Pursuits

SEMESTER-VII

COURSE 16: E LEARNING

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Select a Learning Management System (LMS)
- Interactive Tutorials
- Online Discussion Forums
- Online Quizzes and Assessments
- Online Portfolios
- Virtual Guest Speakers or Experts

SEMESTER-VII

COURSE 17: 2D DESIGN

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Familiarize students with the Toon Boom software and its interface.
- Apply design principles to create visually appealing and engaging 2D artwork.
- Understand the concepts of line quality, shading, and texture in 2D design.
- Explore techniques for designing character anatomy, proportions, and poses.
- Create visually appealing and detailed backgrounds that complement the overall animation.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Gain a strong understanding of the Toon Boom software interface and its key features and tools.
- Apply these principles to create visually appealing and effective 2D designs.
- Use lighting techniques to add depth and atmosphere to 2D artwork.
- Develop the ability to tell stories visually and engage viewers with compelling visuals.
- Apply animation techniques to create fluid and believable movement in 2D designs.

III. Syllabus:

UNIT I: Introduction to 2D Animation Software, Project Creation, Creating Scenes in software, About Saving, About Server, User Interface, Menus, Toolbars, Workspaces, Documentation

UNIT II: Layers and Columns, Layers, Cloning Layers, About Groups, Drawing, About Brush tool, Brush presets, creating a pencil, About Shape tools, Stamp Tools, Eraser Tool, Drawing Space, Isometric Perspective

UNIT III: Painting and Colors, Color swatches, Palettes, Painting, Dirt Cleanup, Gradient and texture, Paperless Animation, Rough Animation, Tools, Onionskin, About art layers, Scene Staging, Layer Position, Animation Tools, Multiplane

UNIT IV: Digital Animation, Pegs, Keyframes, Controls, Functions, Velocity, Morphing Animation, Creating Morphing, Hints, morphing quality, Importing & Scanning, Multi-layers PSD, About FLA, PSD Layouts

UNIT V: Camera Set-up and Animation, Character Rigging, Tig Types, Models, Character Breakdown, Z Nudging, Cut-out Animation, Deformations, Effects, Sound, Rendering & Exporting, Library & Templates

IV. References:

- Harmony 20 Advanced - toon boom harmony 20 advanced user guide 2021

- Harmony17 Premium - Getting Started Guide, 2020
- Toon Boom Studio: Beginner's Guide" by Kelly Paige (This book provides a comprehensive introduction to Toon Boom Studio, covering the basics of 2D design, animation, and the software's features and tools.)

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Animation Film Club.
- Collaborative Animation Project.
- Design Contests and Challenges
- Animation Showcases and Exhibitions.
- Design Critiques and Feedback Sessions.

b) Suggested Co-Curricular Activities:

- Virtual Debates and Discussions
- Collaborative Online Projects
- Online Competitions and Challenges
- Online Personal Development Courses
- Arts and Creative Pursuits

SEMESTER-VII

COURSE 17: 2D DESIGN

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Character Design.
- Storyboard.
- Animation to your character's actions.
- Timing and Sound mood of your animation.
 - Rendering and Export of your artwork and animation.

SEMESTER-VII

COURSE 18: 2D GAME

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Create compelling and engaging 2D game experiences by designing levels, mechanics, and gameplay systems.
- Focus on designing and building levels or environments within the game.
- Develop the underlying mechanics and systems that make the game interactive and fun.
- Combine artistic and technical skills to optimize and integrate art assets into the game.
- Test and identify bugs, glitches, and other issues in the game. Your objective could be to ensure the game's quality by providing valuable feedback to the development team and improving the overall player experience.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Create compelling and engaging 2D game experiences
- Focus on designing and building levels or environments within the game.
- Develop the underlying mechanics and systems that make the game interactive and fun.
- Create 2D art assets, including characters, environments, and objects, that bring the game world to life.
- Students will gain knowledge of level design principles, including creating balanced and challenging levels, pacing, introducing new mechanics, and guiding the player's experience through level progression.

III. Syllabus:

Unit - I: Introduction to Unreal Engine and 2D Game Development: Overview of Unreal Engine, Interface, tools, workspace, difference between 2D and 3D game, Setting Up a 2D Game Project: Creating a new 2D game project, Configuring project settings, Navigating the project structure.

Unit - II: Working with 2D Art Assets: Introduction to 2D art assets, Exploring different types of 2D art assets, Importing and managing 2D art, Creating 2D Levels and Environments: concept of levels and environments in 2D games, tile maps to build levels

Unit - III: Implementing Player Movement and Controls, Setting up player character blueprints and animations, Handling player input for movement and actions, Adding physics-based movement or platforming mechanics, Designing Gameplay Mechanics, Designing core gameplay mechanics, Implementing game rules, objectives, and win/lose conditions, Creating interactions with objects, enemies, or NPCs

Unit - IV: User Interface (UI) Design for 2D Games, Introduction to UI design, Creating menus, heads-up displays, Sound Design and Effects, Understanding the role of sound, Implementing sound effects, background music in the game.

Unit - V: Testing, Debugging, and Optimization: Importance of testing and debugging, Techniques for identifying and fixing common bugs and issues, optimizing performance, Packaging and Distribution: Preparing the 2D game for distribution on different platforms, Creating installers or executable files, Exploring options for publishing.

IV. References:

- "Unreal Engine 4 for 2D Game Development" by Simon Borgersen and Lauren S. Ferro
- "Learning Unreal Engine Game Development" by Joanna Lee and Xavier Coelho-Kostolny
- "Blueprints Visual Scripting for Unreal Engine" by Brenden Sewell

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Game Jams
- Game Development Clubs or Organizations
- Game Showcases and Exhibitions
- Competitions and Game Challenges
- Game Development Hackathons

b) Suggested Co-Curricular Activities:

- Game Development Workshops
- Unreal Engine Tutorials and Demos
- Game Development Competitions
- Game Development Clubs or Groups
- Game Streaming or Content Creation

SEMESTER-VII

COURSE 18: 2D GAME

Practical

Credits: 3

3 hrs/week

VI. List of Experiments:

- Game Development Workshops
- Unreal Engine Tutorials and Demos
- Game Development Competitions
- Game Development Clubs or Groups
 - Game Streaming or Content Creation

SEMESTER-VII

COURSE 19: I CLONE

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Learn to create and animate 3D characters and objects in real-time using iClone's intuitive interface and animation tools.
- Gain proficiency in creating and customizing 3D characters in iClone.
- Explore the integration of motion capture data into iClone.
- Develop skills in designing and creating virtual sets and environments in iClone.
- Explore iClone's special effects capabilities to add visual enhancements to your animations.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Gain the ability to bring characters to life through realistic movements, gestures, and expressions.
- Acquire skills in creating and customizing 3D characters using iClone's character creation tools.
- Understand how to integrate motion capture data into iClone and apply it to animate characters.
- Develop the ability to design and create virtual sets and environments in iClone.
- Gain expertise in creating realistic facial animations and accurate lip syncing using iClone's facial animation tools.

III. Syllabus:

UNIT I: Introduction to iClone, Main Menu, Environment, Camera Toolbar, Physics Toolbar, Timeline panel, Scene manager, PDR Environment setup, Time, 2D Background section, Snap to grid, Texture and editor

UNIT II: 3D Real-time Viewer, Render options, Drag and Drop, Image and Video, Audio, System Requirements, Video memory usage, Visual Enhancements, Performance Notes, Loading files, Real-time rendering

Unit III: Material and Texture, Lights and Shadows, Opacity, Creating Animation, Removing all animation, Body proportions, Applying Cloth, Show or hide Inner Meshes, RL Head, Crazy talk8, Environmental Settings, Clone Cloth, Gloves and Shoes, Actor.

UNIT IV: Clone Bone, creating ahead, Creating a Face, Photo enhancement, Facial Features, Full head morph, Motion puppet panel, Exaggeration and Speed, Puppeteering Principles for Body puppet panel, Multilayer recording, Puppet to Timeline Clip.

UNIT V: IK and FK, Toolbars for morph creator, Physics characters, Rigid Body, Soft Cloth, Dynamic, Kinematic, creating moto with hinge, Moving and Rotating Spring effect, Rendering.

IV. References:

- "iClone 7: Master Class" by M.D. McCallum and Paolo Ciccone - This comprehensive guide covers everything from character creation to animation techniques and scene design in iClone 7, providing step-by-step instructions and practical tips.

- "The Essential Guide to iClone 7" by M.D. McCallum - This book offers a thorough introduction to iClone 7, covering the basics of character creation, motion editing, scene building, and more. It includes tutorials and examples to help you get started.

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Establish an animation club where students can come together to learn and explore animation using iClone.
- Organize workshops where students learn the fundamentals of film production using iClone.
- Host virtual storytelling competitions where students use iClone to create captivating narratives. Conducting quiz program on the 3D
- Challenge students to create visual effects or motion graphics using iClone

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-VII

COURSE 19: I CLONE

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Character Animation Showcase
- Virtual News Report
- Historical Documentary
- Music Video Production
- Virtual Storybook Adaptation
 - Science Fiction Short Film

SEMESTER-VII

COURSE 20: ELEVATION DESIGN

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Develop skills in scene organization and management in 3ds Max. Learn to efficiently organize objects, layers
- Understand how to integrate 3ds Max into a larger production pipeline.
- Gain knowledge of techniques for creating high-quality visualizations and presentations using 3ds Max.
- Develop proficiency in 3D modelling using 3ds Max's powerful modelling tools.
- Understand the process of applying textures and materials to 3D models in 3ds Max.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- This course covers the popular 3ds Max program for architecture modelling.
- This gives the student an opportunity to explore the possibilities in 3D architectural visualization.
- Create accurate 3D models of architectural designs, including buildings, interiors, and landscapes, using 3ds Max's modeling tools.
- Apply realistic materials and textures to your 3D models in 3ds Max.
- Utilize 3ds Max's lighting features to create realistic lighting scenarios for architectural visualization.

III. Syllabus:

Unit - I: 3D Software Interface, Modelling concepts - Spline based modelling, Mesh modelling, Parametric modelling. Spline sub objects, Splines to 3D, Cross section modifier, Surface modifier, Extrude, Bevel, Lathe, Loft, Weld vertices. Introduction to modifiers.

Unit - II: Polygons: Editable poly sub objects, Edit poly modifier, Slice plane, Cut tool, Parametric deformers, AEC extended: Stairs, Windows, Doors, Foliage Etc. Furniture modeling using polygons: Sofa, Chair, Tables, Bed, Shelf, Curtain, Towels, Computer chair etc.

Unit - III: Introduction to texturing, Standard materials and shades, creating uniform textures, UV map, Unwrap UV, Different maps, Editing UV coordinates. Arch & Design materials, V-ray ProMaterials. Applying texture on furniture, floor, glass and metal materials. Multi Sub Object Materials for furniture, doors, windows Etc.

Unit - IV: Introduction to digital lighting, Light theory, Creating three-point lighting system, Exposure Controls, Basic lights and photometric lights, Daylight system. Advanced lighting - Selecting advanced lighting. Rendering with V-ray, V-ray lights and shadows. Controlling indirect illumination. Camera – Controlling. Camera, Lens settings, Field of view, Environment range, Clipping planes, Depth of field, Motion blur

Unit - V: Animation: Key frame animation, Animation along trajectories, modify animation using function curves, Parameter Curve Out-of-Range. How to import architectural plan (.DWG format) and model the structure, create a camera walk through of the finished architecture model. Rendering tools, Completing a project from modeling through rendering.

IV. References:

1. Realistic Architectural Visualization with 3ds Max & Mental Ray: Jamie Cardoso & Roger Cusson
2. Essential CG Lighting Techniques with 3ds Max: Darren Brooker

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- 3D Design Challenge
- Architectural Visualization Project
- Product Design Challenge

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-VII

COURSE 20: ELEVATION DESIGN

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Architectural Visualization
- Character Modelling
- Product Design Visualization
- Motion Graphics Animation

SEMESTER-VIII

COURSE 21: ACTING FOR ANIMATION

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Analyze the character's traits, quirks, and relationships to inform your performance.
- Learn how to use your voice to express the character's emotions and bring out their unique qualities.
- Learn to convey emotions and actions through exaggerated movements suitable for animation.
- Develop techniques to evoke empathy and connect with the audience on an emotional level.
- Understand the importance of timing and pacing in animation.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Acting for animation requires creativity, observation, and a deep understanding of character.
- Continuously refining your skills.
- You can bring life and authenticity to your animated characters.

III. Syllabus:

UNIT I: Character Development: Begin by understanding the personality, backstory, and motivations of the character. This knowledge will help inform the acting choices and bring depth to the performance. **Observation:** Observe real-life actors, people, and animals to understand their body language, facial expressions, and gestures. Pay attention to how emotions are conveyed through subtle movements and reactions.

UNIT II: Physicality: The body movements of an animated character should be deliberate and purposeful. Exaggerate gestures and poses to make them visually appealing and enhance the clarity of the character's actions. **Facial Expressions:**

The face is an essential tool for expressing emotions in animation. Study the different muscle movements and nuances of facial expressions to create authentic and relatable characters..

UNIT III: Posing and Timing: Consider the timing and spacing of each pose to convey the character's thoughts and emotions effectively. Experiment with different poses to find the ones that best communicate the intended message. **Voice Acting:** For characters with dialogue, voice acting plays a crucial role in conveying emotions and delivering lines convincingly. Pay attention to intonation, emphasis, and pacing to enhance the character's personality..

UNIT IV: Subtext and Internal Thoughts: A character's internal thoughts and motivations often shape their actions and reactions. Communicate subtext through subtle movements, facial expressions, and gestures to add depth to the performance. **Reference Footage:** Use reference footage or record yourself acting out scenes to study and understand the weight, timing, and movement of the character. This will help in creating more realistic and believable performances.

UNIT V: Collaboration: Work closely with animators, directors, and fellow artists to receive feedback and refine your acting choices. Collaboration can bring fresh perspectives and help elevate the quality of the animation. **Continual learning:** Acting for animation is a skill that can always be improved. Take workshops, attend acting classes, and study the works of renowned animators and actors to enhance your understanding and execution of acting principles.

IV. References:

- "The Animator's Survival Kit" by Richard Williams"
- "Acting for Animators" by Ed Hooks"
- "Drawn to Life: 20 Golden Years of Disney Master Classes" by Walt Stanchfield"
- "Acting and Performance for Animation" by Derek Hayes and Chris Webster

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Voice Acting Workshops
- Character Study and Improvisation Sessions:
- Animated Scene Performances
- Animation Film Club Screenings and Discussions
- Storytelling Workshops
- Animation Competitions

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-VIII

COURSE 21: ACTING FOR ANIMATION

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- Character Monologue
- Emotion Study
- Lip Sync Exercise
- Physicality Exploration
- Scene Recreation

SEMESTER-VIII

COURSE 22: ADVANCED TEXTURING

Theory

Credits: 3

3 hrs/week

VII. Course Objectives:

- Learn to create 3D models using Maya's modeling tools.
- Texturing and UV Mapping: Gain proficiency in applying textures to 3D models
- Learn the fundamentals of texture painting using Substance Painter.
- Explore Substance Painter's material creation workflow.
- Understand the different texture maps and channels used in Substance Painter.

VIII. Learning Outcomes

Students at the successful completion of the course will be able to:

- you can establish a smooth and efficient workflow between Maya and Substance.
- Painter. enabling you to create high-quality 3D models with detailed textures for your projects.
- Remember to experiment, practice, and explore the various features offered by both software to unleash your creativity and achieve stunning results.

IX. Syllabus:

UNIT I: Model Creation in Maya: Start by creating your 3D model in Maya using polygonal modelling techniques. Ensure that your model is clean and has proper UV mapping, as this will affect the quality of texturing in Substance Painter.

UNIT II: UV Unwrapping in Maya: After modelling, unwrap your model's UVs in Maya to create a 2D representation of its surface. Efficient UV unwrapping is crucial for texture painting in Substance Painter. Use tools like the UV Texture Editor in Maya to arrange and scale the UV islands to minimize distortion and maximize texture resolution.

UNIT III: Exporting the Model: Once your model is UV unwrapped, export it from Maya in a compatible format for Substance Painter. Common formats include OBJ, FBX, or Alembic. Make sure to include the exported model file and the corresponding texture maps (if any) in a separate folder for easy access in Substance Painter. Importing the Model into Substance Painter: Launch Substance Painter and create a new project. Use the import function to bring your model into Substance Painter. Select the appropriate file format and adjust any import settings as needed.

UNIT IV: Texture Painting in Substance Painter: Substance Painter offers a range of tools and materials for creating textures. Start by selecting a base material or creating a custom material for your model. Use the painting tools to add colour, roughness, metalness, and other texture details to your model. Take advantage of Substance Painter's layer system for non-destructive edits and easy tweaking.

UNIT V:

Exporting Textures from Substance Painter:

Once you're satisfied with your texture work, export the final textures from Substance Painter. Common formats include PNG, TGA, or EXR. Substance Painter allows you to export individual texture maps or a combined texture set, depending on your needs.

X. References:

- "Substance Painter for Beginners" by Richard T. Hawkes: A beginner's guide to Substance Painter with step-by-step tutorials and practical examples.
- Learning Autodesk Maya 2022: A Hands-On Introduction to 3D Animation and Visual Effects" by Tony Mullen: A comprehensive guide to learning Maya with practical examples and exercises."Acting for Animators" by Ed Hooks"

Web resources suggested by the Teacher concerned and the college Librarian including reading material

XI. a) Co-Curricular Activities:

- Participate in Substance Painter-focused communities such as the Substance 3D Community or Polycount forums.
- Many online platforms and communities host Substance Painter challenges and contests.
- Build an online presence by sharing your Substance Painter creations on social media platforms like Instagram, Twitter, or Art Station.
- Keep an eye out for industry events, conferences, and trade shows related to 3D art, game development

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-VIII

COURSE 22: ADVANCED TEXTURING

Practical

Credits: 1

2 hrs/week

XII. List of Experiments:

- Texture a Realistic Object
- Create a Sci-Fi Material
- Paint a Character or Creature Texture
- Weathering and Wear
- Texture a Game Asset

SEMESTER-VIII

COURSE 23: ENVIRONMENT DESIGN

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Autodesk Maya Paint Effects is an innovative toolset that empowers artists to unlock their creativity.
- Add captivating organic details to their 3D scenes.
- With a wide range of brushes, presets, and customization options,
- Powerful feature opens up a world of artistic possibilities.
- The capabilities and advantages of Autodesk Maya Paint Effects, providing you with a comprehensive understanding of how this tool can elevate your 3D creations.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Autodesk Maya Paint Effects offers a powerful toolset for artists to bring their imagination to life by adding intricate organic details to their 3D scenes.
- By combining the artistry of traditional painting techniques with the precision and control of digital tools,
- artists can create breathtaking visual effects.
- We aim to equip you with the knowledge and inspiration to unleash your creativity and explore the endless possibilities offered by Autodesk Maya Paint Effects.

III. Syllabus:

UNIT I: Introduction to Autodesk Maya Paint Effects: Overview of Paint Effects as a toolset within Autodesk Maya. Explanation of how Paint Effects combine the versatility of 2D painting with the depth of 3D graphics. Showcase of the wide range of organic elements that can be created, including trees, flowers, grass, clouds, and more.

UNIT II: Getting Started with Paint Effects: Step-by-step guide on how to access and enable the Paint Effects toolset in Autodesk Maya. Introduction to the various brushes and pre-sets available and how to utilize them effectively. Exploration of customization options for size, shape, colour, opacity, and density to achieve desired visual effects.

UNIT III: Creating Complex Effects: Advanced techniques for creating dynamic and visually stunning effects using animated strokes. In-depth explanation of how to animate stroke properties such as growth, movement, and deformation. Showcase of examples such as swaying grass, blooming flowers, and cascading waterfalls.

UNIT IV: Integrating Paint Effects in a 3D Scene: Guidance on how to seamlessly integrate painted strokes with lighting, shadows, and other scene elements. Demonstration of techniques for achieving realistic interactions and ensuring visual coherence. Overview of rendering options for high-quality outputs, including Maya Software, Mental Ray, and Arnold.

UNIT V: Pushing the Boundaries of Creativity: Exploration of advanced tips and tricks to enhance your Paint Effects creations. Showcasing innovative uses of Paint Effects in various industries, such as film, television, and video games. Inspiring examples and case studies from professional artists who have pushed the boundaries of what is possible with Paint Effects.

IV. References:

1. Autodesk Maya 2020: A Comprehensive Guide" by Prof. Sham Tickoo
2. "Mastering Autodesk Maya" by Todd Palamar: This book offers a comprehensive guide to Autodesk Maya

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- 3D Animation Club
- Digital Art Exhibition
- Environmental Awareness Project
- Collaborative Storytelling

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-VIII

COURSE 23: ENVIRONMENT DESIGN

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

- 1) Create a Nature Scene
- 2) Animated Foliage
- 3) Atmospheric Effects
- 4) Abstract Art
- 5) Environmental Animation

SEMESTER-VIII

COURSE 24: DIGITAL ENVIRONMENT

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- E-on Vue is a powerful software suite used for creating and rendering 3D environments.
- It offers a wide range of features and tools for creating stunning natural landscapes, realistic atmospheres, and immersive visual effects.
- To maximize your productivity and achieve high-quality results with E-on Vue,
- It's essential to establish an effective workflow. In this guide, we will outline the key components of an E-on Vue workflow.
- Provide recommendations for each stage of the process.

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Gain the ability to create detailed and visually stunning 3D environments and landscapes using e-on Vue's extensive toolset.
- Develop skills in designing and sculpting terrains, including mountains, valleys, rivers, and coastlines.
- Understand how to populate scenes with a variety of plants, trees, and vegetation using e-on Vue's vegetation system
- Explore e-on Vue's atmospheric simulation capabilities, including cloud systems, fog, and atmospheric scattering.
- Gain proficiency in e-on Vue's lighting tools and techniques. Learn how to create and manipulate different types of lighting sources

III. Syllabus:

UNIT I: Planning and Conceptualization: Concept Development: Spend time brainstorming and sketching ideas for your scene. Define the key elements, such as the environment, lighting, and composition. Storyboarding: Create a rough Storyboard or visual plan to outline the sequence of events or the narrative flow within your scene.

UNIT II: Scene Setup: Terrain and Ecosystem Creation: Use E-on Vue's terrain editor to shape the landforms and apply textures or materials to the terrain. Explore the ecosystem tools to populate your scene with vegetation, rocks, and other elements to create a realistic environment. Atmosphere and Lighting: Utilize Vue's atmospheric editor to create realistic skies, clouds, and atmospheric effects. Experiment with different lighting setups and adjust the position, intensity, and colour of the light sources to achieve the desired mood and ambiance. Camera Placement: Set up cameras to capture different perspectives within your scene. Experiment with camera angles, focal lengths, and compositions to create visually engaging shots.

UNIT III: Material and Texture Creation: Material Editor: Use E-on Vue's material editor to create and customize materials for objects in your scene. Adjust parameters such as reflectivity, transparency, roughness, and bump maps to achieve the desired appearance. Texture Mapping: Apply textures to

objects to add detail and realism. Experiment with different mapping techniques such as UV mapping, procedural textures, and image-based textures.

Shader and Material Libraries: Take advantage of pre-built shader and material libraries provided by E-on Vue or create your own custom shaders.

UNIT IV: Rendering and Post-Processing: Render Settings: Configure the rendering settings based on your project requirements. Adjust parameters such as resolution, antialiasing, raytracing quality, and global illumination settings to achieve the desired level of detail and realism. **Multi-Pass Rendering:** Consider using multi-pass rendering to separate different elements of your scene, such as shadows, reflections, and ambient occlusion. This allows for greater control during post-processing and compositing.

UNIT V: Iteration and Refinement: Feedback and Review: Seek feedback from peers, mentors, or clients to get a fresh perspective on your scene. Iterate based on the feedback received to refine and improve the overall quality.

Fine-tuning: Pay attention to small details and make necessary adjustments to enhance the overall realism and aesthetics of your scene. This may involve refining materials, adjusting lighting, or making changes to the composition. **Optimization:** Optimize your scene by adjusting settings and parameters to improve rendering speed and efficiency. This can involve techniques such as LOD (Level of Detail), object culling, and optimizing material complexity.

IV. References:

1. "The Vue Book: An Introduction to E-on Vue" by Barry Marshall
2. "Creating 3D Environments: Conceptualization and Production Techniques" by Rob Weaver
3. "Digital Nature Photography and Adobe Photoshop" by Kevin Moss
4. "Digital Landscape Photography: In the Footsteps of Ansel Adams and the Great Masters" by Michael Frye

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- 3D Animation Club
- Digital Art Exhibition
- Environmental Awareness Project
- Collaborative Storytelling

b) Suggested Co-Curricular Activities:

- Domain specific quiz
- Practical production work on 3D portfolio
- Oral presentations on outputs

SEMESTER-VIII

COURSE 24: DIGITAL ENVIRONMENT

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Landscape Creation
2. Scene Reconstruction
3. Visual Effects Showcase
4. Animated Environment
5. Cross-Software Integration

SEMESTER-VIII

COURSE 25: GAME CONCEPTS

Theory

Credits: 3

3 hrs/week

I. Course Objectives:

- Familiarize students with the fundamental principles, theories, and terminology of game design, including mechanics, dynamics, and aesthetics.
- Examine different game genres, their defining characteristics, and gameplay mechanics. Enable students to analyze and evaluate games within various genres.
- Investigate visual design principles and aesthetics specific to games.
- Teach students the principles and techniques of level design, including pacing, difficulty progression, and player

II. Learning Outcomes

Students at the successful completion of the course will be able to:

- Knowledge of Game Design Principles
- Students will develop the ability to analyze and evaluate games
- They will learn to identify and solve design challenges in game development.
- Students will understand the importance of balancing gameplay mechanics
- Create 2D art assets, including characters, environments, and objects, that bring the game world to life

III. Syllabus:

Unit - I: Introduction to Game Design, Overview of game design principles, terminology, and the game development process, Game Genres and Mechanics: Exploration of different game genres, Study of common game mechanics, application in various genres

Unit - II: Game Narrative and Storytelling: Understanding the role of narrative in games, storytelling techniques, Analysis of storytelling structures and methods in games, Game Aesthetics and Visual Design: visual design principles and aesthetics in games, Study of art styles, color theory, composition, and creating immersive game worlds

Unit - III: Game Audio and Sound Design: Introduction to the importance of audio in games, Study of sound design principles, music integration, and creating audio assets for games, Game User Interface (UI) and User Experience (UX): Exploration of UI/UX design principles specific to games. Analysis of effective interface design, player feedback systems, and usability testing

Unit - IV: Game Monetization and Business Models, different monetization models used in games, such as free-to-play, premium, in-app purchases, and advertising, game testing methodologies, Study of bug tracking, regression testing, playtesting, and quality assurance processes.

Unit - V: Game Marketing and Distribution: digital marketing, social media, and community building, Study of game distribution platforms and publishing options, Ethical and Social Implications in Games, including representation, inclusivity, diversity, and social impact.

IV. References:

1. "The Art of Game Design: A Book of Lenses" by Jesse Schell
2. "Rules of Play: Game Design Fundamentals" by Katie Salen and Eric Zimmerman
3. "Game Design Workshop: A Playcentric Approach to Creating Innovative Games" by Tracy Fullerton

Web resources suggested by the Teacher concerned and the college Librarian including reading material

V. a) Co-Curricular Activities:

- Game Jams
- Game Development Clubs or Organizations
- Game Showcases and Exhibitions
- Competitions and Game Challenges
- Game Development Hackathons

b) Suggested Co-Curricular Activities:

- Game Development Workshops
- Unreal Engine Tutorials and Demos
- Game Development Competitions
- Game Development Clubs or Groups
- Game Development Workshops

SEMESTER-VIII

COURSE 25: GAME CONCEPTS

Practical

Credits: 1

2 hrs/week

VI. List of Experiments:

1. Create a Basic Platformer
2. Puzzle Game Development
3. Level Design Challenge
4. Game Mechanics Prototype
5. Game Documentation and Presentation