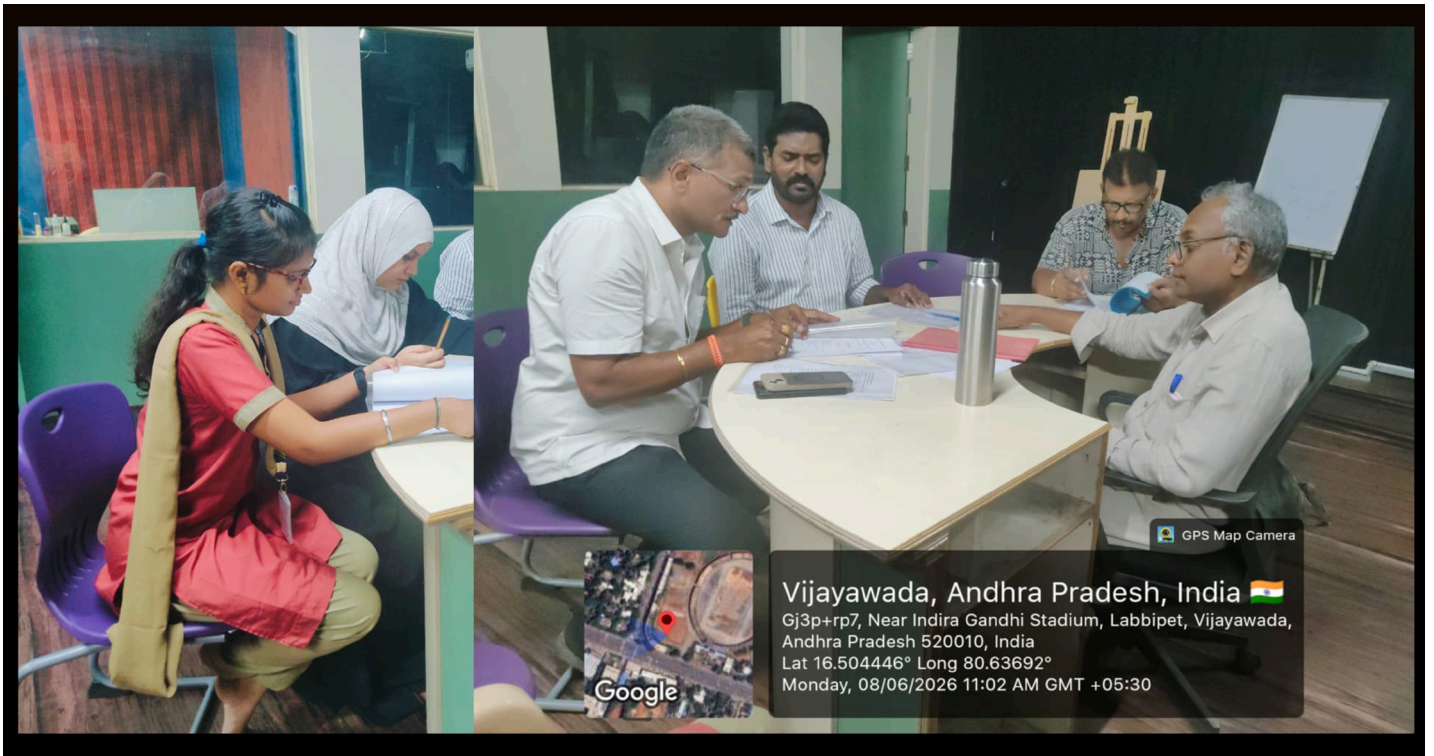




AGENDA OF THE BOARD OF STUDIES (BOS) MEETING

Agenda Item 1: Welcome Address and Confirmation of Quorum

- ✧ **Discussion:** The Chairperson welcomed the members and confirmed that the required quorum was present.

Decision: The meeting was formally commenced.

Agenda Item 2: Approval of Previous Meeting Minutes

- ✧ **Discussion:** The minutes of the previous BoS meeting were presented for review.

Decision: The members unanimously approved the previous meeting minutes.

Agenda Item 3: Review of Existing Curriculum Structure

- ✧ **Discussion:** The curriculum structure was reviewed. It was noted that no Minor Courses are offered during the I and II Semesters.

Decision: The Board agreed to explore suitable Minor Courses from the III Semester onwards.

Agenda Item 4: Introduction of Animation Minor Programme

- ✧ **Discussion:** The Chairperson presented the proposal for introducing Animation as a Minor Programme from III Semester onwards. The syllabus, course outcomes, credits, and industry relevance were discussed in detail.

Decision: The members unanimously approved the proposal.

Agenda Item 5: Approval of Animation Minor Syllabus

- ✧ **Discussion:** The proposed syllabus and course structure for the Animation Minor Programme were examined and discussed.

Decision: The syllabus and course structure were approved and recommended for implementation.

Agenda Item 6: Resolution

Resolution Passed:

“Resolved that Animation Minor Courses be introduced from III Semester onwards, as there are no Minor Courses offered in I and II Semesters. The Board of Studies approves the syllabus and course structure and recommends the same for implementation subject to the approval of the Academic Council and other statutory bodies.”

Agenda Item 7: Any Other Matter

- ✧ **Discussion:** No additional matters were raised.

Decision: Nil.

Vote of Thanks

The meeting concluded with a vote of thanks to the Chair.

Meeting Started: 11:00 AM

Meeting Ended: 2:00 PM

Agenda and Minutes Structure

Agenda Schedule

Time	Agenda Item
11:00 AM – 11:10 AM	Welcome Address by the Chairperson and Introduction of Members
11:10 AM – 11:20 AM	Confirmation of Quorum and Approval of Previous Meeting Minutes
11:20 AM – 11:40 AM	Review of Existing Curriculum and Academic Regulations
11:40 AM – 12:00 PM	Discussion on the Need for Minor Courses from III Semester Onwards
12:00 PM – 12:30 PM	Presentation and Discussion of Animation Minor Programme Structure
12:30 PM – 12:45 PM	Review of Course Outcomes, Credits, and Assessment Pattern
12:45 PM – 01:00 PM	Discussion on Resource Requirements and Implementation Plan
01:00 PM – 01:15 PM	Lunch / Refreshment Break
01:15 PM – 01:40 PM	Suggestions and Recommendations from BOS Members
01:40 PM – 01:50 PM	Approval of Animation Minor Syllabus and Course Structure
01:50 PM – 01:55 PM	Passing of Resolution for Introduction of Animation Minor Courses from III Semester Onwards
01:55 PM – 02:00 PM	Vote of Thanks and Closing Remarks

Resolution

The Board of Studies discussed the curriculum structure and noted that no Minor Courses are offered during the I and II Semesters. After reviewing the proposed syllabus and course structure, the Board unanimously approved the introduction of **Animation Minor Courses from III Semester onwards** and resolved to recommend the same for approval by the Academic Council and other competent authorities.

Meeting Concluded at: 2:00 PM

Resolution for Introduction of Animation Minor Courses from III Semester Onwards

The Board of Studies (BOS) of the Department of Visual communication met on 08/06/2026 and reviewed the curriculum structure under the NEP framework.

The Board observed that there are **no Minor Courses prescribed in the I and II Semesters** of the undergraduate programme. Therefore, to provide students with multidisciplinary learning opportunities and industry-relevant skills, the Board discussed the introduction of **Animation Minor Courses from the III Semester onwards**.

After detailed deliberations, the Board unanimously resolved to introduce **Animation as a Minor Programme from III Semester onwards**. The proposed minor courses will provide students with knowledge and practical skills in animation principles, digital design, 2D and 3D animation, multimedia production, visual effects, and related technologies.

The Board further resolved that the Animation Minor syllabus, course structure, credits, and assessment pattern for III Semester and subsequent semesters are approved and recommended for implementation from the academic year **2026-27** for the batch **2025**, subject to the approval of the Academic Council and other statutory authorities of the institution.

The proposed Animation Minor Programme shall be offered from the III Semester onwards with the following objectives:

- I. To provide foundational knowledge in animation principles and digital design.
- II. To develop skills in 2D and 3D animation techniques.
- III. To expose students to industry-standard animation software and tools.
- IV. To encourage creativity, storytelling, and visual communication.
- V. To prepare students for careers in animation, multimedia, gaming, and related industries.

The syllabus, course structure, credits, and assessment pattern for the Animation Minor Programme were reviewed and approved by the Board. The programme shall be implemented from the academic year **2026 - 2027 for the batch 2025**, subject to the approval of the Academic Council and other statutory bodies of the institution.

Hence, the Board of Studies unanimously approved the introduction of Animation Minor Courses from III Semester onwards, as no Minor Courses are offered during I and II Semesters.

Krishna University, Machilipatnam
Syllabus for Animation (Minor) in consonance with Curriculum
framework w.e.f. AY 2025-26

COURSE STRUCTURE

Year	Semester	Course	Title of the Course	No. of Hrs /Week	No. of Credits
II	III	1	Animation Basics	4	4
	IV	2	AI in 2d Animation	4	4
III	V	3	Introduction to 3D	4	4
		4	AI in 3D Animation	4	4
	VI	5	Stop Motion Animation	4	4
		6	AI-Powered Motion Graphics and Visual Effects Production	4	4

Course Objectives

- 1.To introduce students to the fundamentals of Artificial Intelligence and its applications in 2D and 3D animation.
- 2.To familiarize students with AI-powered tools and techniques used in animation production workflows.
- 3.To develop skills in creating AI-assisted character design, motion generation, and visual effects.
- 4.To understand the role of machine learning and generative AI in automating animation tasks.
- 5.To enable students to integrate AI technologies into animation projects for improved creativity and productivity.
- 6.To expose students to current industry trends and ethical considerations related to AI in animation.

Course Outcomes

Upon successful completion of the course, students will be able to:

- CO1:** Explain the fundamentals of Artificial Intelligence and its relevance to 2D and 3D animation.
- CO2:** Apply AI-based tools for character design, image generation, animation creation, and content enhancement.
- CO3:** Create 2D and 3D animation assets using AI-assisted workflows and industry-standard software.
- CO4:** Analyze and evaluate the effectiveness of AI techniques in animation production and visual storytelling.
- CO5:** Develop animation projects that integrate AI technologies for motion generation, visual effects, and rendering.
- CO6:** Demonstrate awareness of ethical, legal, and professional issues associated with AI-generated animation content.

Skill Outcomes

1. AI-assisted Character Design
2. Generative AI for Animation
3. Motion Capture and AI-based Rigging
4. AI-enhanced Rendering and Visual Effects
5. Creative Storytelling using AI Tools
6. Digital Content Production and Workflow Automation

Employability Outcomes

Students can explore career opportunities such as:

1. AI Animation Artist
2. 2D/3D Animator
3. Motion Graphics Designer
4. Digital Content Creator
5. Visual Effects (VFX) Artist
6. Multimedia Designer
7. Game Asset Designer
8. Creative AI Specialist

SEMESTER III

COURSE 1: ANIMATION BASICS

Theory

Credits :4

4 Hours/week

Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamental principles of 2D animation, including timing, spacing, squash and stretch, anticipation, and follow-through.
2. Create character designs, backgrounds, and visual assets for animation projects.
3. Use industry-standard 2D animation software to develop animated content.
4. Apply storyboarding techniques to plan and organize animation sequences.
5. Demonstrate knowledge of frame-by-frame and tween animation methods.
6. Create smooth character movements, facial expressions, and lip-sync animations.
7. Develop short animated videos incorporating storytelling and visual communication techniques.
8. Understand the animation production pipeline from concept development to final rendering.
9. Apply color theory, composition, and design principles to enhance visual appeal.
10. Produce professional-quality 2D animation projects suitable for portfolios, presentations, and digital media platforms.

Learning Outcomes

Upon successful completion of this course, learners will be able to:

1. Explain the basic concepts, principles, and workflow of 2D animation.
2. Create storyboards and visual narratives for animation projects.
3. Design characters, props, and backgrounds suitable for animated productions.
4. Apply animation principles such as timing, spacing, anticipation, and squash and stretch.
5. Use 2D animation software to create and edit animated sequences.
6. Produce frame-by-frame and tween-based animations with smooth motion.
7. Integrate sound effects, voice overs, and visual effects into animation projects.
8. Develop short animated videos that effectively communicate ideas and stories.
9. Analyze and improve animation quality using design and visual communication principles.
10. Build a portfolio of 2D animation projects demonstrating creativity and technical proficiency.

Syllabus:

Unit - I

Fundamentals:

Fundamentals of computer graphics, types of graphics, different file formats, different video formats, Aspect ratio, Resolution(PPI,DPI, Color wheel)

Unit - II

History:

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

Principles :

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

What is Animation: -Its definition, early examples of Animation. History of Animation: - Stop Motion Photo Animation, Zoetrope, Thaumatrope, Cel and Paper Animation, early Disney's Cel Animation Processes. Types of Animation: -Cel Animation, Stop Motion Animation, Computer Animation, 2-D Animation, 3-D Animation.

UNIT-V

Artificial intelligence in Animation : Artificial Intelligence (AI) in 2D animation software automates time-consuming tasks like in-betweening, voice acting, lip-syncing, and asset creation. It allows creators to produce high-quality animations by simply providing text prompts or static images, drastically reducing the need for frame-by-frame drawing.

Toon Boom Harmony: Industry-standard 2D software that incorporates opt-in AI tools for assisted in-betweening and asset generation to help professionals iterate faster.

Activities:

1.Introduction to Animation Principles

Demonstration and practice of timing, spacing, squash and stretch, and anticipation.

2.Storyboard Creation

Develop storyboards for short animation sequences.

3.Character Design Workshop

Create original characters with different expressions and poses.

4. Background and Asset Design

Design environments, props, and visual elements for animation scenes.

5. Frame-by-Frame Animation Exercise

Create simple animations such as a bouncing ball or walking character.

6. Tween Animation Practice

Use animation software to create motion using keyframes and tweening techniques.

7. Facial Expression and Lip-Sync Activity

Animate character emotions and synchronize mouth movements with audio.

8. Motion Graphics Project

Design animated titles, logos, or promotional content.

9. Short Animation Production

Plan, create, and edit a short 2D animated film.

10. Peer Review and Critique

Present animation projects, receive feedback, and implement improvements.

11. Portfolio Development

Compile completed animation works into a professional portfolio.

12. Final Project Presentation

Showcase a complete 2D animation project demonstrating storytelling and animation skills.

Reference

Books :

1. **The Animator's Survival Kit** – The Animator's Survival Kit by Richard Williams
2. **Animation: From Pencil to Pixel** – Animation: From Pencil to Pixel by Tony White
3. **The Illusion of Life: Disney Animation** – The Illusion of Life: Disney Animation by Frank Thomas and Ollie Johnston
4. **Timing for Animation** – Timing for Animation by Harold Whitaker and John Halas
5. **Cartoon Animation** – Cartoon Animation by Preston Blair
6. **Character Animation Crash Course!** – Character Animation Crash Course! by Eric Goldberg
7. **Digital Animation Essentials** – Digital Animation Essentials by Andy Beane
8. **Basics Animation: Digital Animation** – Basics Animation: Digital Animation by Andrew Chong

Additional Resources

- Adobe Animate Documentation
- [Toon Boom Learn Portal](#)
- [OpenToonz Documentation](#)

SEMESTER IV

COURSE 2: AI IN 2D ANIMATION

Theory

Credits :4

4 Hours/week

Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamentals of Artificial Intelligence and its applications in 2D animation.
2. Explore AI-powered tools and technologies used in animation production.
3. Develop skills in AI-assisted character design, background generation, and asset creation.
4. Apply prompt engineering techniques to generate animation concepts and visual content.
5. Utilize AI tools for automated animation, motion generation, lip-syncing, and visual effects.
6. Integrate AI technologies into the 2D animation production pipeline.
7. Evaluate the ethical, creative, and professional implications of AI in animation.
8. Create innovative 2D animation projects using AI-assisted workflows.

Learning Outcomes

Upon successful completion of the course, students will be able to:

1. Explain the role of AI in modern 2D animation production and creative workflows.
2. Use AI-based tools to generate characters, backgrounds, storyboards, and animation assets.
3. Apply prompt engineering techniques to create effective animation-related outputs.
4. Develop AI-assisted animations incorporating automated motion, lip-syncing, and effects.
5. Analyze the advantages and limitations of AI technologies in animation production.
6. Integrate AI-generated content with traditional 2D animation techniques.
7. Demonstrate ethical and responsible use of AI tools in creative media projects.
8. Produce professional-quality AI-enhanced 2D animation projects suitable for portfolios and industry applications.

Syllabus

UNIT-I

Various Terms: -Animation Drawings/Cels, Rough Drawings, Clean ups, Color reference drawings, Layout, Model Sheet, Key Drawings and in Betweens, Master Background, Concept Piece, Character drawing, Story Board.

UNIT II

Animation: - Illusion of Life, straight action and pose to pose Timing, Exaggeration, Drama and Psychological Effect, Fade in and fade out, Squash and Stretch, Anticipation, staging, follow through and overlapping action, Arcs, Solid Drawing, Appeal, slow in and slow out,

Secondary Action.

UNIT III

Skills for an Animation Artist: -Visual and creative development of an Artist, importance of observation with minute details, efficiency to draw gestures, facial expressions, good listener, hard work and patience, creative and innovative.

UNIT-IV

Generative AI (Text-to-Video & Image-to-Video)

These platforms create full animations from scratch using prompts, making them ideal for storytellers, social media content creators, and marketers.

Image-to-Video Precision Use Runway and Luma to animate the motion-ready assets created on The AI Decision Matrix: When to Use AI vs. Manual Techniques

- Use AI for: atmospheric motion, concept spots, social loops, and complex environmental plates.
- Avoid AI for: precise brand physics, typography, UI interaction, and frame-accurate character performance. Directed Motion Master Motion Brush techniques to isolate movement from static geometry.

UNIT V

AI Storyboarding and Creative Strategy The Adobe Firefly Foundation Build commercially safe mood boards and style frames using Adobe Firefly. AI-Assisted Storyboarding Rapidly iterate on compositions and camera angles within the Adobe ecosystem. Ethics and Business Considerations

- Indemnity and Licensing: Understand practical guidance on indemnity and licensing, including Firefly versus open models.
- Approval Language: Learn how to present AI-assisted work to clients and document source material.
- Workflow Selection: Determine when to choose AI-native versus hybrid-AI workflows based on project budget and legal risk.

Activities

1. Introduction to AI in Animation

Explore AI concepts and their applications in the animation industry.

2. AI Tool Familiarization

Hands-on practice with AI-powered animation and design tools.

3. Prompt Engineering Workshop

Create effective prompts for generating animation concepts, characters, and backgrounds.

4. AI-Based Character Design

Generate and refine character designs using AI image-generation tools.

5. AI Storyboard Creation

Develop storyboards and visual narratives with AI-assisted tools.

6. Background and Asset Generation

Create animation assets, props, and environments using AI.

7. AI-Assisted Motion Animation

Experiment with AI tools for character movement and automated animation.

8. Lip-Sync and Voice Integration

Use AI tools to synchronize character speech and facial expressions.

9. AI-Enhanced Visual Effects

Apply AI-generated effects and enhancements to animation scenes.

10. Short Animation Project

Produce a short 2D animated video using AI-assisted workflows.

11. Case Study Analysis

Review and discuss real-world applications of AI in animation studios and media production.

12. Portfolio Development

Compile AI-generated and AI-assisted animation projects into a professional portfolio.

13. Group Project and Presentation

Collaborate on an AI-driven animation project and present the final outcome.

14. Ethics and Responsible AI Discussion

Evaluate ethical issues, copyright concerns, and responsible use of AI in creative industries.

15. Final Capstone Project

Design and develop a complete AI-enhanced 2D animation project demonstrating technical and creative skills.

References :

Text Books

1. The Animator's Survival Kit – Richard Williams, Faber & Faber.
2. Animation: From Pencil to Pixel – Tony White, Focal Press.
3. Digital Animation Essentials – Andy Beane, Routledge.
4. Artificial Intelligence: A Modern Approach – Stuart Russell and Peter Norvig, Pearson Education.
5. Deep Learning – Ian Goodfellow, Yoshua Bengio, and Aaron Courville, MIT Press.

Reference Books

1. Character Animation Crash Course! – Eric Goldberg.
2. Cartoon Animation – Preston Blair.
3. Timing for Animation – Harold Whitaker and John Halas.
4. AI for Creativity: Exploring Artificial Intelligence in Art and Design – Reference text on AI-assisted creative production.
5. Machine Learning for Artists – Practical applications of AI tools in visual arts, design, and animation.

Online Resources

- Adobe Animate Documentation
- [Toon Boom Learn Portal](#)
- [OpenToonz Documentation](#)
- [Adobe Firefly Resources](#)
- [Runway Academy](#)
- [OpenAI Documentation](#)

Journals and Research Sources

1. Animation Journal
2. Computer Graphics Forum
3. ACM Transactions on Graphics
4. International Journal of Human-Computer Interaction

SEMESTER V

COURSE 3 : INTRODUCTION TO 3D

Theory

Credits :4

4 Hours/week

Learning Objectives:

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

Learning Outcomes

1. Students at the successful completion of the course will be able to:
2. Equip with the basic knowledge of Autodesk Maya
3. Getting sufficient knowledge for doing simple 3D project
4. Develop the skill of overall 3D workflow
5. Understanding the use of lights
6. Learn how to render 3D objects

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: antialiasing, setting colour profiles, diagnosing ray tracing.

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

References:

1. Peter Ratner-3D Human Modelling and Animation
2. 3D Modelling and Printing with Tinkercad: Create and Print - Book by James FloydKelly
3. Integrating 3D Modelling, Photogrammetry - Book by David Halbstein and Shaun Foster
4. 3D Automotive Modelling: An Insider's Guide to 3D Car - Book by Andrew Gahan

SEMESTER V

COURSE 4: AI IN 3D ANIMATION

Theory

Credits :4

4 Hours/week

Learning Objectives

By the end of the course, students will be able to:

1. Understand the fundamentals of Artificial Intelligence and its applications in 3D animation.
2. Explore AI-powered tools and technologies used in modeling, rigging, animation, rendering, and visual effects.
3. Develop skills in AI-assisted 3D asset creation, character design, and environment generation.
4. Apply machine learning and generative AI techniques to automate animation workflows.
5. Utilize AI tools for motion capture, facial animation, lip-syncing, and procedural animation.
6. Integrate AI technologies into the complete 3D animation production pipeline.
7. Analyze ethical, legal, and creative issues related to AI-generated content.
8. Design and produce innovative AI-enhanced 3D animation projects for industry and research applications.

Learning Outcomes

Upon successful completion of the course, students will be able to:

1. Explain the role and impact of AI technologies in modern 3D animation production.
2. Create 3D models, characters, and environments using AI-assisted tools and workflows.
3. Apply AI techniques for automated rigging, motion generation, and character animation.
4. Utilize AI-powered rendering, lighting, and visual effects tools to improve production quality.
5. Integrate motion capture and AI-driven animation systems into 3D projects.
6. Evaluate the effectiveness, advantages, and limitations of AI in animation workflows.
7. Demonstrate ethical and professional practices in the use of AI-generated assets and content.
8. Develop and present a complete AI-assisted 3D animation project showcasing technical proficiency and creative innovation.
9. Collaborate effectively in AI-driven animation production environments.
10. Build a professional portfolio featuring AI-enhanced 3D animation works suitable for careers in animation, gaming, VFX, virtual production, and digital media industries.

Syllabus

Unit I: Introduction to AI and 3D Animation

- Fundamentals of Artificial Intelligence
- Evolution of AI in the Animation Industry
- Overview of 3D Animation Pipeline
- AI Applications in Modeling, Texturing, Rigging, and Rendering
- Introduction to AI-Powered Animation Tools and Platforms
- Ethics, Copyright, and Responsible Use of AI in Animation

Unit II: AI-Assisted 3D Modeling and Asset Creation

- Principles of 3D Modeling
- AI-Based Object and Character Generation
- Generative AI for Concept Art and Asset Development
- AI Tools for Environment and Scene Creation
- Automated UV Mapping and Texturing
- Asset Optimization Using Machine Learning Techniques

Unit III: AI for Character Design, Rigging, and Motion

- AI-Driven Character Design and Customization
- Automated Skeleton Creation and Rigging
- Motion Capture Technologies and AI Integration
- AI-Assisted Facial Animation and Lip Synchronization
- Motion Prediction and Procedural Animation
- Real-Time Character Animation Systems

Unit IV: AI-Enhanced Visual Effects and Rendering

- AI-Based Lighting and Scene Optimization
- Intelligent Camera Tracking and Virtual Cinematography
- AI-Assisted Particle Systems and Visual Effects
- Neural Rendering Techniques
- AI-Powered Upscaling and Image Enhancement
- Real-Time Rendering and Performance Optimization

Unit V: AI-Driven Animation Production and Future Trends

- AI-Assisted Storyboarding and Pre-Visualization
- Automated Scene Composition and Editing
- Generative AI for Animation Production
- Collaborative Human-AI Creative Workflows
- Emerging Technologies: Digital Humans, Virtual Production, and Metaverse Applications
- Capstone Project: Development of an AI-Assisted 3D Animation Production

Activities

- AI-based Character Modeling Project
- Automated Rigging and Animation Exercise
- Motion Capture and AI Motion Retargeting
- AI-Assisted Rendering and Visual Effects Project
- Final AI-Driven 3D Animation Short Film
- AI Texture and Material Generation Project
- AI Lighting and Rendering Assignment

- Visual Effects Creation Using AI Tools
- Short 3D Animated Film Production
- Portfolio Development and Presentation

References :

Textbooks

1. Artificial Intelligence: A Modern Approach – Stuart Russell and Peter Norvig, Pearson Education.
2. Deep Learning – Ian Goodfellow, Yoshua Bengio, and Aaron Courville, MIT Press.
3. Digital Animation Essentials – Andy Beane, Routledge.
4. Animation: From Pencil to Pixel – Tony White, Focal Press.
5. The Animator's Survival Kit – Richard Williams, Faber & Faber.
6. 3D Animation Essentials – Andy Beane, Wiley Publications.
7. Digital Modeling – William Vaughan, New Riders.
8. Mastering Autodesk Maya – Autodesk Press.

Reference Books

1. Computer Animation: Algorithms and Techniques – Rick Parent, Morgan Kaufmann.
2. Virtual Production and AI in Digital Media – Industry-focused reference on AI-driven content creation.
3. Machine Learning for Artists – Practical applications of AI in creative media and animation.
4. The Art of 3D Computer Animation and Effects – Isaac Kerlow.

Online Resources

- [Blender Documentation](#)
- Autodesk Maya Learning Resources
- [Unreal Engine Documentation](#)
- [NVIDIA Omniverse Documentation](#)
- [Runway Academy](#)
- [OpenAI Documentation](#)

SEMESTER VI

COURSE 5 : STOP MOTION ANIMATION

Theory

Credits :4

4 Hours/week

Course Objectives:

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

Learning Outcomes

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

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

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.

Activities :

1. Study tour for getting professional practice in industry-standard Stop Motion
2. Students will give seminar on Oral presentation of the Stop Motion animation
3. Conducting quiz program on the Stop Motion Animation
4. Group Discussions on Stop Motion Animation

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 Harryhausen
7. Stop motion Filming and Performance: Tom Brierton
8. Stop motion Puppet Sculpting: Tom Brierton

SEMESTER VI

COURSE 6 : AI-Powered Motion Graphics and Visual Effects Production

Theory

Credits :4

4 Hours/week

Learning Objectives

By the end of this course, students will be able to:

1. Understand the fundamentals of AI-driven motion graphics and visual effects production.
2. Explore AI tools and technologies used for image generation, video creation, animation, and post-production.
3. Develop skills in AI-assisted asset creation, scene composition, and visual storytelling.
4. Apply cinematic principles, camera movements, and motion design techniques in creative projects.
5. Create depth and realism using 2.5D parallax, camera tracking, and compositing methods.
6. Integrate branding elements, typography, and visual identity into motion graphics projects.
7. Utilize AI-based enhancement tools for video stabilization, frame interpolation, upscaling, and quality improvement.
8. Produce professional-quality motion graphics and visual effects sequences suitable for industry applications.

Learning Outcomes

Upon successful completion of the course, students will be able to:

1. Explain the role of Artificial Intelligence in modern motion graphics and visual effects workflows.
2. Generate and refine creative assets using AI-powered design and video production tools.
3. Design visually engaging motion graphics sequences incorporating storytelling principles and cinematic techniques.
4. Apply 2.5D parallax, camera tracking, and compositing techniques to create depth and realism.
5. Integrate logos, typography, and branding elements effectively within animated content.
6. Identify and correct temporal inconsistencies, perspective errors, and visual artifacts in AI-generated media.
7. Use professional AI enhancement tools to stabilize, upscale, and optimize video outputs for high-resolution delivery.
8. Produce a polished, client-ready motion graphics project that demonstrates technical proficiency and creative decision-making.

9. Evaluate the effectiveness and limitations of AI-assisted production workflows.
10. Build a professional portfolio showcasing AI-powered motion graphics and visual effects projects.

Syllabus

Unit I: Foundations of AI in Motion Graphics and Visual Storytelling

- Introduction to Artificial Intelligence in Creative Media
- Evolution of Motion Graphics and Visual Effects
- AI-Assisted Content Creation Workflow
- Principles of Visual Storytelling and Design
- AI Tools for Image, Video, and Animation Generation
- Ethics, Copyright, and Responsible Use of AI

Unit II: AI-Based Asset Creation and Scene Development

- Generative AI for Concept Art and Storyboards
- AI-Assisted Character, Environment, and Prop Design
- Image-to-Video and Text-to-Video Workflows
- Layer-Based Composition Techniques
- Scene Layout, Perspective, and Visual Continuity
- Asset Management and Production Organization

Unit III: Cinematic Motion Design and AI Animation

- Camera Language and Cinematic Composition
- AI-Assisted Camera Movements and Scene Animation
- 2.5D Parallax Techniques
- Depth Mapping and Layer Separation
- 3D Camera Tracking Fundamentals
- Motion Graphics for Branding and Advertising

Unit IV: Brand Integration and Professional Production Workflow

- Typography and Visual Communication Principles
- Logo Placement and Brand Consistency
- Designing Professional Motion Graphic Sequences
- AI-Assisted Editing and Compositing
- Color Correction and Visual Enhancement
- Creating Client-Ready Visual Deliverables

Unit V: Quality Control, Final Polish, and Portfolio Project

- Inspection Checklist for Professional Deliverables
- Detecting and Correcting Temporal Inconsistencies
- Anatomy Drift and Perspective Error Correction
- AI Video Enhancement using Topaz Video AI
 - Stabilization and De-blurring
 - Frame Interpolation
 - Video Upscaling and Dithering

- Final Rendering and Delivery Standards (HD, 4K)
- Capstone Project: AI-Powered Professional Motion Graphics Sequence

Activities

1. AI-generated storyboard creation.
2. Image-to-video animation exercises.
3. 2.5D parallax scene development.
4. AI-assisted camera tracking project.
5. Brand logo integration and typography design.
6. Motion graphics advertisement creation.
7. AI video enhancement using professional tools.
8. Quality control and error correction workshop.
9. Professional portfolio development.
10. Final capstone project presentation.

References :

Text Books

1. The Visual Story – Bruce Block, Routledge.
2. Motion Graphics: Principles and Practices from the Ground Up – Austin Shaw, Routledge.
3. Design for Motion: Fundamentals and Techniques of Motion Design – Austin Shaw, Focal Press.
4. The Filmmaker's Eye – Gustavo Mercado, Focal Press.
5. Artificial Intelligence: A Modern Approach – Stuart Russell and Peter Norvig, Pearson.

Reference Books

1. Digital Compositing for Film and Video – Steve Wright, Routledge.
2. The VES Handbook of Visual Effects – Edited by Susan Zwerman and Jeffrey A. Okun.
3. Digital Video and HD: Algorithms and Interfaces – Charles Poynton.
4. The Technique of Film and Video Editing – Ken Dancyger.
5. Generative AI for Creative Professionals – Industry-oriented reference on AI-assisted content creation and media workflows.

Online Resources

- [Adobe After Effects Documentation](#)
- [Adobe Firefly Resources](#)
- [Topaz Video AI Documentation](#)
- [Runway Academy](#)
- [Blender Documentation](#)
- [OpenAI Documentation](#)

Journals and Magazines

1. Computer Graphics Forum
2. ACM Transactions on Graphics

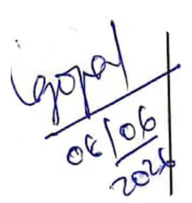
3. Animation Journal
4. Journal of Visual Communication

Krishna University, Machilipatnam Board of Studies Meeting

UG BOARD OF STUDIES FOR VISUAL COMMUNICATION.

A Board of Studies meeting was held for the approval and framing of the Minor Course Syllabus in Animation on 08/06/2026 at 11:00 am in Nalanda Degree College.

The following Members of the BOS were present:

UG BOARD OF STUDIES FOR VISUAL COMMUNICATION COURSE		
MEMBER	NAME & DESIGNATION	SIGNATURE
CHAIRMAN	Fr G Rayappa SJ MA Folklore NET, MA JMC B.Ed. Andhra Loyola College, Mobile: 9494019889 E-mail: gaddam.rayappa@gmail.com	
MEMBER	B.Srinivasarao M.Sc. Multimedia., Pursuing Ph.D - VR, AR, MR, XR, AI Nalanda Degree College Mobile: 8977107007, 7036128683 E-mail: srinivasarao@nalanda.edu.in	
MEMBER	M Venugopal MSC (MATHS) MA JMC, LLM, Nalanda Degree College Mobile: 9441216666, E-mail: venugopal@nalanda.edu.in	

MEMBER	S Bhargavi M.Sc. Computer Science, Ai Mobile:6300730046, E-mail: sankubhargavi1404@gmail.com	<i>S. Bhargavi</i> 8/6/26
INDUSTRIALIST	K Jaya Raju, 10 TV Mobile:8498084059	<i>K. Jaya Raju</i> 8/6/26
STUDENT - 1	Md. Fathima B.Sc. Visual Communication Hon's Nalanda Degree College, Mobile: 78421 16064	<i>MD Fathima</i> 8/6/26
STUDENT - 2	P. Bhavana B.Sc. Visual Communication Hon's 7287867686	<i>P. Bhavana</i> 8/6/26

Agenda:

Item 1: Approval of Minor syllabus/modules for Minor Course for Semesters III to VI for the Academic Year 2026-2027 for the batch 2025 coming into effect immediately from III to VI Semesters in the present Academic year.

Item 2: Approval of blue print.

Item 3: Approval of division of marks for internal assessment.

Item 4: Any other item with the approval of the Chair.

RESOLUTIONS

The Board of Studies made the following resolutions.

SEMESTER - III

1. It is resolved that **ONE** Minor Course prescribed by APSCHE is to be taught to III Semester Students under Single Major Programme.

Sl. No.	Name of the Minor Course
1	Animation Basics

2. The Course carries 4 credits. The end Semester examination for 70 Marks is to be held, for which a Blueprint is appended.

Blueprint for End Semester MINOR COURSE

SECTION - A		
Short Answer Questions	4 out of 6	Marks= 4x5 =20
SECTION - B		
Long Answers Essay Type (With Internal Choice)	5 out of 10	Marks= 5x10=50

3. Hence, all the **III** Semester students must undergo **ONE** minor course.
4. It is resolved that the Course carries the 4 (four) Credits.
5. This resolution comes into force with immediate effect in the academic year 2026-27 for the batch 2025, III semester students.
6. This Course is to be adopted and implemented in hybrid mode, by exposing the students to online content available on online Platform under the supervision of the concerned teacher and also explicating the content in the classroom. Hence the course has both online and offline content delivery in the classroom.
7. The classes for the Course should be incorporated in the college Time Table and should be strictly adhered to.
10. The timelines for the said Course are to be followed scrupulously and must coincide with the University End-Semester Examinations.
11. It is advised that the concerned teacher too registers himself/herself in the Course and goes through the Course content in advance.
12. The assessment for the Course is carried out through Continuous Internal Assessment (CIA) and End Semester Examination by the University in 30:70 ratio.
13. Under the Continuous Internal Assessment (CIA), two mid-term examinations for 50+50 marks are to be held and the marks obtained by the students should be scaled down to 18.
14. The End Semester Examination by the University is held for 70 Marks with the Blue Print appended herewith.

15. The Internal examinations (30 Marks) and End semester examinations (70 Marks) are to be taken together (100 Marks) to constitute 4 credits.
16. The colleges should create proper infrastructural facilities for screening the Course content in the classrooms and the concerned teacher should take all the necessary steps to ensure smooth conduct of the Course.

SEMESTER - IV

1. It is resolved that **ONE** Minor Course prescribed by APSCHE is to be taught to IV Semester Students under Single Major Programmes.

Sl.No.	Name of the Minor Course
1	AI in 2D Animation

2. It is resolved that the minor Course carries 4 (four) Credits This Course is mandatory and the student must undergo the Course without any exception/deviation.
Hence, all the **IV** Semester students must undergo **ONE** minor course.
3. This resolution comes into force with immediate effect for the present IV semesters students.
4. The Course is to be adopted and implemented in hybrid mode, by exposing the students to online content available on online platform under the supervision of the concerned teacher and also explicating the content in the classroom. Hence the course has both online and offline content delivery in the classroom.
5. The classes for Minor Course should be incorporated in the college Time Table and should be strictly adhered to.
6. The timelines for the said Course are to be followed scrupulously and must coincide with the University End-Semester Examinations.
7. It is advised that the concerned teacher too registers himself/herself in the Course and goes through the Course content in advance.
8. The assessment for the Course is carried out through Continuous Internal Assessment (CIA) and End Semester Examination by the University in 30:70 ratio. The total marks would be scaled down proportionally to 70 Marks and 3 Credits.
9. The CIA should involve 2 (two) Mid Term Tests for 50 Marks (10+40) preferably with Q&A's and the total number of marks obtained by the student are to be scaled down to 18.
10. The End Semester Examination by the University is held for 70 Marks with the Blue Print appended herewith.
11. The colleges should create proper infrastructural facilities for screening the Course content in the classrooms and the concerned teacher should take all the necessary steps to ensure smooth conduct of the Course.

BLUEPRINT FOR END SEMESTER UNIVERSITY EXAM FOR THE COURSE
TOTAL MARKS =70

SECTION - A		
Short Answer Questions	4 out of 6	Marks= 4x5 =20
SECTION - B		
Long Answers Essay Type	5 out of 10	Marks= 5x10=50

SEMESTER – V

1. It is resolved that **TWO** Minor Courses prescribed by APSCHE is to be taught to V Semester Students under Single Major Programmes.

Sl. No.	Name of the Minor Courses
1	Introduction to 3D
2	AI in 3D Animation

2. It is resolved that the Minor Course carries 4 (four) Credits This Course is mandatory and the student must undergo the Course without any exception/deviation.
Hence, all the V Semester students must undergo **TWO** minor course.
3. This resolution comes into force with immediate effect for the present V semester students.
4. The Course is to be adopted and implemented in hybrid mode, by exposing the students to online content available on online Platform under the supervision of the concerned teacher and also explicating the content in the classroom. Hence the course has both online and offline content delivery in the classroom.
5. The classes for Course should be incorporated in the college Time Table and should be strictly adhered to.
6. The timelines for the said Course are to be followed scrupulously and must coincide with the University End-Semester Examinations.
7. It is advised that the concerned teacher too registers himself/herself in the Course and goes through the Course content in advance.
8. The assessment for the Course is carried out through Continuous Internal Assessment (CIA) and End Semester Examination by the University in 30:70 ratio. The total marks would be scaled down proportionally to 70 Marks and 3 Credits.

9. The CIA should involve 2 (two) Mid Term Tests for 50 Marks (10+40) preferably with Q&A's and the total number of marks obtained by the student are to be scaled down to 18.
10. The End Semester Examination by the University is held for 70 Marks with the Blue Print appended herewith.
11. The colleges should create proper infrastructural facilities for screening the Course content in the classrooms and the concerned teacher should take all the necessary steps to ensure smooth conduct of the Course.

BLUEPRINT FOR END SEMESTER UNIVERSITY EXAM FOR THE MINOR COURSE

TOTAL MARKS =70

SECTION - A		
Short Answer Questions	4 out of 6	Marks= 4x5 =20
SECTION - B		
Long Answers Essay Type	5 out of 10	Marks= 5x10=50

This resolution comes into force with immediate effect in the academic year 2025-26 for the present V semesters students.

SEMESTER – VI

1. It is resolved that TWO Minor Courses prescribed by APSCH is to be taught to VI Semester Students under Single Major Programme.

Sl. No.	Name of the Minor Courses
1	Stop Motion Animation
2	AI-Powered Motion Graphics and Visual Effects Production

2. It is resolved that the minor Course carries 4 (four) Credits This Course is mandatory and the student must undergo the Course without any exception/deviation.
3. Hence, all the VI Semester students must undergo TWO minor course. This resolution comes into force with immediate effect for the present VI semester students.
4. The Course is to be adopted and implemented in hybrid mode, by exposing the students to online content available on online Platform under the supervision of the concerned teacher and also explicating the content in the classroom. Hence the course has both online and offline content delivery in the classroom.
5. The classes for Course should be incorporated in the college Time Table and should be strictly adhered to.
6. The timelines for the said Course are to be followed scrupulously and must coincide with the

University End-Semester Examinations.

7. It is advised that the concerned teacher too registers himself/herself in the Course and goes through the content in advance.
8. The assessment for the Course is carried out through Continuous Internal Assessment (CIA) and End Semester Examination by the University in 30:70 ratio. The total marks would be scaled down proportionally to 70 Marks and 3 Credits.
9. The CIA should involve 2 (two) Mid Term Tests for 50 Marks (10+40) preferably with Q&A's and the total number of marks obtained by the student are to be scaled down to 18.
10. The End Semester Examination by the University is held for 70 Marks with the Blue Print appended herewith.
11. The colleges should create proper infrastructural facilities for screening the Course content in the classrooms and the concerned teacher should take all the necessary steps to ensure smooth conduct of the Course.

KRISHNA UNIVERSITY
III SEMESTER
BLUEPRINT OF QUESTION PAPER
FOR VISUAL COMMUNICATION COURSE

Time : 180 Minutes

Max. Marks : 70

SECTION-A

Answer any four questions

Marks : 4 x 5 M = 20M

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

SECTION-B

Answer any FIVE questions.

Marks: 5x10M = 50M

7. (a) _____

OR

(b) _____

8. (a) _____

OR

(b) _____

9.(a) _____
OR

(b) _____

10.(a) _____
OR

(b) _____

11.(a) _____
OR

(b) _____

KRISHNA UNIVERSITY
IV SEMESTER
BLUEPRINT OF QUESTION PAPER
FOR VISUAL COMMUNICATION COURSE

Time : 180 Minutes

Max. Marks : 70

SECTION-A

Answer any **four** questions

Marks : $4 \times 5 M = 20M$

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

SECTION-B

Answer any **Five** questions.

Marks: $5 \times 10M = 50M$

7. (a) _____
OR

(b) _____

8. (a) _____
OR

(b) _____

9. (a) _____
OR

(b) _____

10.(a) _____

OR

(b) _____

11.(a) _____

OR

(b) _____

KRISHNA UNIVERSITY
V SEMESTER
BLUEPRINT OF QUESTION PAPER
FOR VISUAL COMMUNICATION COURSE

Time : 180 Minutes

Max. Marks : 70

SECTION-A

Answer any four questions

Marks : 4 x 5 M =

20M

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

SECTION-B

Answer any Five questions.

Marks: 5x10M = 50M

7. (a) _____

OR

(b) _____

8. (a) _____

OR

(b) _____

9. (a) _____

OR

(b) _____

10.(a) _____

OR

(b) _____

11.(a) _____

OR

(b) _____

KRISHNA UNIVERSITY
VI SEMESTER
BLUEPRINT OF QUESTION PAPER
FOR VISUAL COMMUNICATION COURSE

Time : 180 Minutes

Max. Marks : 70

SECTION-A

Answer any four questions

Marks : 4 x 5 M =

20M

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

SECTION-B

Answer any Five questions.

Marks: 5x10M = 50M

7. (a) _____

OR

(b) _____

8. (a) _____

OR

(b) _____

9. (a) _____

OR

(b) _____

10.(a) _____

OR

(b) _____

11.(a) _____

OR

(b) _____