SUBBALAKSHMI LAKSHMIPATHY COLLEGE OF SCIENCE

An Autonomous Institution

(Affiliated to Madurai Kamaraj University &

Re-Accredited with B Grade by NAAC)

T.V.R. NAGAR, ARUPPUKOTTAI ROAD, MADURAI-22

DEPARTMENT OF ANIMATION

B.Sc Animation

Programme Code : AN1003

(To be followed for the batch 2018 – 2021)

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T.V.R. NAGAR, MADURAI – 22

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Choice Based Credit System

ANNEXURE – I

REGULATIONS OF THE COURSE

SYLLABUS TO BE FOLLOWED FOR STUDENTS THOSE WHO JOINED IN THEACADEMIC YEAR 2018-2019 (BATCH : 2018 - 2021)

1. Programme Outcomes

The Programme Outcomes of the B.Sc Animation degree are

To PROVIDE a world class curriculum and the industry-based instruction in digital arts and computer animation.

To PRODUCE globally competitive graduates with excellent in animation skills and expertise in computer graphics and movie production process

To PROMOTE the growth and development of the animation industry in the southern part of the country especially in Tamil Nadu. This has been the cultural hub of the south India

To PROPUP the rich and traditional arts like painting, drawing and sculpting to the young generation.

2. Programme Specific Outcomes

The Programme Specific Outcomes of the B.Sc Animation degree are

The college encourages and the curriculum is decided in a way which promotes Creative Arts Entrepreneurship which helps students to develop an understanding of business processes, basic business principles, self-promotion, sales techniques, portfolio preparation, financial techniques and legal issues. These are tailored specifically for students planning to work in creative fields such as the Storyboard and Concept Artist,

- Character Designer
- Web Designer
- Layout and Matte Painting Artist
- 3D Character / Set Modeler
- Texturing and Lighting Artist
- Rigger
- 2D and 3D Animator
- Production Co-coordinator
- Art Director
- Editor
- Technical Director
- Script Writer
- Setup Artist
- Graphic Designer
- Creative Director
- Compositor
- Visualizer
- Architectural Designer
- 2D & 3D Game Designer

3. Eligibility for Admission

Pass in +2 (Any Group) with Minimum of 50 Marks.

4. Duration of the Course

The student shall undergo the prescribed course of study for a period of not less than three academic years (Six Semesters).

5. Medium of Instruction : English

6. Components of Subjects

Part I	**:**	Tamil / Other Languages
Part II	**:**	English
Part III	**:**	Major Papers – Core, Allied, Electives & Project
Part IV	**:**	Basic Tamil/Advanced Tamil/Non Major Elective
		Skill Based Elective
		Value Education
		Environmental Studies
Part V	**:**	Extension Activity (NSS/RRC) / Physical Education

Semester	: I	No. of Hours	: 4
Subject	: Graphics Design - Theory	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

AIM:

To encourage the students to involve actively in participative learning of Graphic Design and to help them to create professional designs.

Course Outcomes:

- By studying Graphic Design students will have a wider horizon in the field of art and will
- Demonstrate artistic growth by executing a variety of images/ text as images, traditional and contemporary techniques that solve complex design problems using creative thinking and analytical skills.
- Develop and demonstrate their understanding and skillful use of the elements and principles of visual design (1. conceptual element, 2. visual element, 3. relational element & 4. practical or functional element.)
- Gain skill to use the digital tools as a powerful means of communication for creation, modification & presentation.
- Study the works of contemporary artists, designers as well as the masters in the field and discuss and enrich their vocabulary of design.

Semester	: I	No. of Hours	: 4
Subject	: Graphics Design – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Aim:

To analyze the students understandability and their practical difficulties while creating a design.

Course Outcomes:

- Build upon the concepts introduced in Graphic Design and prepare the student to successfully meet the challenges of Graphic Design
- Complete exploratory projects in design theory and practice, which may be used to develop a presentation portfolio of personal work.
- Develop an understanding of the language of design, which includes critical theory, critique, history, technology, and craftsmanship

Semester	: I	No. of Hours	: 4
Subject	: Digital Art and Design – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Aim:

To develop competencies and skills needed for becoming an effective Animator and to enable students to manage Animation Projects from its Conceptual Stage to the final product creation

Course Outcomes:

To familiarize the students with various approaches, methods and techniques of Animation Technology. Mastering traditional & digital tools to produce stills and moving images. Exploring different approaches in computer animation.

Semester	: I	No. of Hours	: 4
Subject	: Drawing Concepts-Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Allied)	Credits	: 4

Aim:

To train students in applying laws of human motion and psychology in 2D or 3D characters.

Course Outcomes:

To develop expertise in life-drawing and related techniques Explore specifically the concept of Visual Perception as applied to visual communication. Explore specifically the concepts of grouping and hierarchy as applied to visual communication. Explore specifically the concept of Gestalt Theory as applied to visual communication. Practice designing page layouts using a grid. Operate with specific graphic design requirements. Define and employ industry standard graphic design terminology to describe projects.

Semester	: I	No. of Hours	: 4
Subject	: Cel Animation – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Allied)	Credits	: 3

Course Outcomes:

The students are introduced to Classical animation and techniques using the light box method and do the animation frame by frame for a sequence. They will be creating and experiencing flip book animation methods and will able to understand the frames per second and other technical aspects of classical animation.

Semester	: I	No. of Hours	: 4
Subject	: Roto & Stereo Paint – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: IV (Skill Based)	Credits	: 2

Course Outcomes:

To train the students to create the animated mattes professionally and Image restoration, dust busting, wire & rig removal or just plain paint.

Semester	: II	No. of Hours	: 6
Subject	: Cartoon Animation – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

To familiarize the students with various approaches, methods and techniques of Animation Technology. To develop competencies and skills needed for becoming an effective Animator. Mastering traditional & digital tools to produce stills and moving images. Exploring different approaches in computer animation. To enable students to manage Animation Projects from its Conceptual Stage to the final product creation. To train students in applying laws of human motion and psychology in 2-D characters. To develop expertise in life-drawing and related techniques. To apply Audio and Video Production Techniques to an Animation Project.

Semester	: II	No. of Hours	: 6
Subject	: Web Design – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

Understand various visualization and imagery techniques. Explain fundamentals of Graphics and various aspects of drawings. Explain fundamentals of typography and understand the scope and application in contemporary society. Create artworks/Illustrations. Use Image Editing tools and retouch images. Understand functional aspects of print advertising. Design and publish a page layout for magazine and brochures

Semester	: II	No. of Hours	: 4
Subject	: Principal of Animation, Media Law & Ethics - Theory		
Subject Code	:		
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

- To teach students about social and cultural impact of mass media.
- To understand the world of Electronic Media.
- To train students reflect values that link the global with the local.
- To become well - versed in the basics of Media Studies.
- To learn about the latest production techniques.
- To practice and think about communication theory and research critically.
- To focus on mass media in general and electronic media in particular Special Emphasis on recent advances in the fast changing field of Media Comprehend Production process, techniques, resource requirements & follow up.
- Develop Graphics and Animation for electronic media.
- Understand media laws and ethics established for electronic media

Semester	: II	No. of Hours	: 5
Subject	: Anatomy for Animation – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Allied)	Credits	: 4

Course Outcomes:

After completing this course, students will be able to apply an understanding of anatomy to the drawing of a human figure; demonstrate improved figure drawing skills; use value and shading in drawing

Semester	: II	No. of Hours	: 4
Subject	: Digital Matte Painting – Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Allied)	Credits	: 3

Course Outcomes:

After completing this course, students will be able to apply an understanding of Matte Concepts and Digital painting Techniques.

Semester	: III	No. of Hours	: 2
Subject	: Introduction to 3D Studio Max -Theory	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 3

Course Outcomes:

This course introduces students to all the major features of 3D studio Max and its tools and interface: modeling, animation, texture, lighting, rendering, expressions, rigging, dynamics, and popular workflow. Concepts are quickly reviewed and explained and then demonstrated using 3D studio Max. Students will gain proficiency by following class examples as well as creating projects and exercises.

Semester	: III	No. of Hours	: 5
Subject	: Animate CC 2D Animation - Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 3

Course Outcomes:

This Subject will impart an experience in handling advanced 2d animation using digital system in developing walk and run cycles movement of animals, and aquatic creatures and birds and insects. It will also give an exposure to the facial animation with expression for 2d characters.

Semester	: III	No. of Hours	: 6
Subject	: Industrial Design in Max -Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

Upon successful completion of this course, students will be able to describe architectural spaces; demonstrate modeling techniques in a real time game character and environments demonstrate techniques for building, texturing, and lighting a environment or a set to function in real time and develop architectural environments and characters for animation.

Semester	: III	No. of Hours	: 6
Subject	: Texturing, Lighting & Rendering in Max –Practical		
Subject Code	:		
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

The students will understand the different types of tactile and visual textures, Materials and shaders. The students can demonstrate the reaction of lights with different materials and also shows the ability to wrap the texture to the given object properly.The students can establish a methodology for lighting design. Develop an understanding of rendering techniques and applications. To develop an understanding of composition through lighting, camera, and color.

Semester	: III	No. of Hours	: 5
Subject	: Gaming Techniques - Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Allied)	Credits	: 3

Course Outcomes:

To understand the basic principles of how a computer game functions. To identify all major components of a computer game and their functions.To create a simple game and optimize it.

Semester	: III	No. of Hours	: 4
Subject	: Videography - Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Allied)	Credits	: 3

Course Outcomes:

To produce media professionals with high quality competencies to work in the field of television, film and other media establishments with a sound knowledge of electronic media related communications that can be applied to develop and produce content for documentaries, television programmes, Ad films and corporate videos

Semester	: III	No. of Hours	: 2
Subject	: Film Appreciation	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: IV (NME)	Credits	: 2

Course Outcomes:

The lessons offers an analysis of films, acting for films and acting for animated films and to Demonstrate knowledge of the historical and technological development of film as an art form and a cultural product. Further reveals knowledge of filmmaking as a craft and a collaborative process.

Semester	: III	No. of Hours	: 2
Subject	: Project in 3d Studio Max – Practical		
Subject Code	:		
Internal Marks	:	External Marks	: 100
Part	: IV (Skill Based)	Credits	: 2

Course Outcomes:

The students will Learn to create and animate virtual environments with 3ds Max, student's will know show how to model 3D objects, rig a character, create realistic physics in Mass-FX, and render both the still and animated projects in mental ray. Students can create 3D projects for film, broadcast, and games with 3ds Max Learn the secrets professionals use to build and animate entire 3D worlds with 3ds Max. They'll learn how to create models, rig and animate characters, build game props and levels, use particle systems to create like rain and fire, and much more.

Semester	: IV	No. of Hours	: 3
Subject	: Introduction to Maya – Theory	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 3

Course Outcomes:

This course introduces students to all the major features of Maya and its tools and interface: modeling, animation, texture, lighting, rendering, expressions, rigging, dynamics, and popular workflow. Concepts are quickly reviewed and explained and then demonstrated using Maya. Students will gain proficiency by following class examples as well as creating projects and exercises. By the end of the course students will have learned what scripting is and what it is used for, in addition to a working knowledge of the syntax and concepts behind writing production tools and animation techniques. In addition, they will learn how to work with the scene graph, transform and shape nodes to gain a deep understanding of how a modern animation pipeline operates.

Semester	: IV	No. of Hours	: 8
Subject	: 3d Modeling in Maya-Practica1	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

Upon successful completion of this course, students will be able to describe architectural spaces; demonstrate modeling techniques in a real time game character and environments demonstrate techniques for building, texturing, and lighting the environment or a set to function in real time and develop architectural environments and characters for animation.

Semester	: IV	No. of Hours	: 8
Subject	: Texturing, Lighting, Camera & Rendering in Maya - Practical		
Subject Code	:		
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

The student's can demonstrate an understanding of visual concepts, their development, and their application for creating works with computer graphics tools. The students will understand the different types of tactile and visual textures, Materials and shaders. The students can demonstrate the reaction of lights with different materials and also shows the ability to wrap the texture to the given object properly.

Semester	: IV	No. of Hours	: 7
Subject	: Character Rigging in Maya-practical		
Subject Code	:		
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 3

Course Outcomes:

Character animation is an important and specialized area of the Animation process concerning the animation of one or more characters featured in an animated production. It is artistically and technically unique from other animation in that it involves the creation of apparent thought and emotion in addition to physical action. This course aims at providing research, designing, animating and rigging virtual characters using Maya 3D technologies. Students will learn how to use appropriate techniques to portray character personality, create fluid body motion and organic movement, staging gesture, weight, thought, action &reaction, lips-sync, and acting with an emphasis on character building and storytelling.

Semester	: IV	No. of Hours	: 4
Subject	: Introduction to Virtual Reality & Augmented Reality - Practical		
Subject Code	:		
Internal Marks	: 25	External Marks	: 75
Part	: IV (Skill Based)	Credits	: 2

Course Outcomes:

The aim of this paper is to make the students to gain knowledge about Virtual Reality & Augmented Reality techniques.

Semester	: IV	No. of Hours	: 2
Subject	: Basic Techniques of Animation	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: IV (NME)	Credits	: 2

Course Outcomes:

This unit aims to introduce the students about the fundamental principles and basic techniques of 2D animation Student will study advanced timing and weight through a series of projects designed to demonstrate the principles of animation.

Issues such as key framing, in-betweening and cycling will be addressed and reinforced.

Semester	: V	No. of Hours	: 8
Subject	: Maya Dynamics- Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

This course enables to students to create computer generated dynamics and particle effects in real-time simulations. Simulate gravity, particle effects, and turbulence, advanced dynamic motion, collision, and motion of particles, objects, fluidics, and their interactions. Simulate rigid body dynamics, constraints and optimizing. Special effects process pipelines and optimization and Implement 2D and 3D asset imaging

Semester	: V	No. of Hours	: 3
Subject	: Video Editing Basics- Theory	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 3

Course Outcomes:

Introductory theory and application of editing techniques using the Avid Editing System. The course is an overview of the editing process, digitizing, and editing of scenes.

Semester	: V	No. of Hours	: 6
Subject	: Non-Linear Editing-(AVID) –Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

The students know the evolution of video and film editing theory and technology. They can identify the components and procedures of the edit room

workflow and recognize and use basic techniques applied to the edit decision making process.Student's can operate typical non linear edit room computer and peripheral hardware and software. Navigate the Avid Editing System interface. He can short pieces/scenes for skill development and content, utilizing concepts of the editing process and the basic tools available with the Avid Editing System.

Semester	: V	No. of Hours	: 6
Subject	: Compositing-Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

To provide students with an understanding of the fundamental issues, technologies and techniques involved in postproduction work; To enable students to appreciate the complexities of integrating computer generated images and animations with real footage; To provide students with the necessary knowledge and skills to undertake core compositing work

Semester	: V	No. of Hours	: 6
Subject	: 3d Animation-Practical	Subject Code	:
Internal Marks	: 25	External Marks	: 75
Part	: III (Core)	Credits	: 4

Course Outcomes:

To familiarize the students with various approaches, methods and techniques of Animation Technology. To develop competencies and skills needed for becoming an effective Animator. Mastering traditional & digital tools to produce stills and moving images. Exploring different approaches in computer animation. To enable students to manage Animation Projects from its Conceptual Stage to the final product creation. To train students in applying laws of human motion and psychology in 3-D characters.

Semester	: V	No. of Hours	: 3
Subject	: Film Appreciation and Creating Demo Reel - Practical		
Subject Code	:		
Internal Marks	: 25	External Marks	: 75
Part	: IV (Skill Based)	Credits	: 2

Course Outcomes:

The lessons offers an analysis of films, acting for films and acting for animated films and to Demonstrate knowledge of the historical and technological development of film as an art form and a cultural product. Further reveals knowledge of filmmaking as a craft and a collaborative process.

Semester	: VI	No. of Hours	: 36
Subject	: Internship or Project	Subject Code	:
Internal Marks	:	External Marks	: 100
Part	: III (Project)	Credits	: 14

Course Outcomes:

To introduce the students to a working environment, and to provide him the experience of a real time production process, and to make student experience the production pipeline the internship / project is included in the 6th semester.