

B.Sc. (ANIMATION & MULTIMEDIA)

A & M - I SEMESTER

THEORY			SESSIONAL		
CODE	TITLE	UNIT	CODE	TITLE	UNIT
BAM 101	Experimental Animation	1.0	BAM 105	Computer Laboratory on 2D Animation	1.0
BAM 102	Foundation course in Classical Animation	1.0	BAM 107	Computer Laboratory on Multimedia-1	1.0
BAM 103	Principles of Animation	1.0			
BAM 104	Creativity - 1	1.0			
BAM 106	Introductions to 3D	1.0			

A & M - II SEMESTER

BAM 201	Animation Techniques	1.0	BAM 204	Computer Laboratories on	
BAM 202	Creativity – II	1.0		Computer Graphics & Multimedia – II	1.0
BAM 203	Audio-Video Tools & Technology	1.0	BAM 205	Computer Laboratories on	
				2D Digital Animation	1.0
			BAM 206	Computer Laboratory on	
				3D Graphics Animation Design	1.0
			BAM 207	Computer Laboratory on Interactive	
				Multimedia	1.0

A & M - III SEMESTER

BAM 301	Advanced Animation Principles	1.0	BAM 303	Computer Laboratory on 2D Ink	
BAM 302	Digital Television Production	1.0		Paint & Compositing Techniques	1.0
			BAM 304	Computer Laboratory on 3D Modelling	1.0
			BAM 305	Computer Laboratory on Web Designing	
				& Development	1.0
			BAM 306	Diploma Showcase Project – I	2.0

A & M - IV SEMESTER

BAM 401	Production for Animation	1.0	BAM 403	Computer Laboratory on Compositing - I	1.0
BAM 402	CL ON 3D character design	1.0	BAM 404	Computer Laboratory on Maya	
				Fundamentals	1.0
			BAM 405	Computer Laboratory on 3D Character	
				Animation	1.0
			BAM 40	Diploma Showcase Project – II	2.0

A & M - V SEMESTER

BAM 501	Fundamental of Game Technology	1.0	BAM 503	Computer Laboratories on Advanced Concepts of 3D Materials Lighting & Rendering	1.0
BAM 502	Direction for Animation	1.0	BAM 504	Computer Laboratory on Advanced 3D Animation	1.0
			BAM 505	Computer Laboratory on Gaming Technology	1.0
			BAM 506	Degree Show Case Project - I	2.0

A & M - VI SEMESTER

BAM 601	Computer Laboratory on Advance Animation Tools	1.0
BAM 602	Computer Laboratory on Emerging Animation Technologies	1.0
BAM 603	Computer Laboratory on Game Development	1.0
BAM 604	Computer Laboratory on 3D Advanced Modelling, Character Rigging, Rendering	1.0
BAM 605	Computer Laboratory on 3d Character Design	1.0
BAM 606	Degree Show Case Project - II	2.0

FIRST SEMESTER

BAM 101	EXPERIMENTAL ANIMATION	1.0
----------------	-------------------------------	------------

Cut-out animation (cardboard sets, houses, layouts designing), clay animation, stop motion shooting technique, animation set designing (table top), Clay character modelling, table-top model lighting, technique of working in groups. Students should submit a project (in groups) at the end of the semester.

- Cut out animation
- Flip Books
- Different types of models using waste materials
- Puppet animation
- Acrylic Colour Landscape
- Clay Modelling
- Clay Animation

Experimental Animation work with different media like:

- Water Colours
- Poster Colours
- Water proof Colours
- Oil pastel Colours
- Pencil Colours
- Charcoal
- Pen and Ink
- Using Dry brush
- And using other waste materials such as sand, Stones, Grass, Hardboard, Different Types of Colour papers & Clay etc.

How to draw the drawings with the help of basic shapes, Animal study, Human anatomy, Shading techniques, Live model study, Introduction- Importance of confidence, Difference between “looking at the drawing” and “seeing the drawing”, What is observation, Procedure- How to approach, Importance of Guideline- Line of action, Overcome the fear, Drawing for animation, An Introduction on how to make drawings for animation, Shapes and forms, About 2d and 3d drawings, Caricaturing – fundamentals, Exaggeration, Attitude, Silhouettes, Boundary- breaking exercises and warm ups, gesture drawing, Line drawing and quick sketches, Drawing from observation, memory and imagination

Introduction to the equipment. The animator's drawing tools, The animation table (light box, Field charts, Line tests, The exposure sheet (“X” sheet), Perspective in animation. Perspective- blocks and boxes, Vanishing point in horizon, Outside horizon and indoors, Scale diagrams in perspective, Different view points, Importance of eye level, Curves and cylinders in perspective, Perspective in 1 point, Perspective in 2 point, Perspective in 3 point, Perspective in multiple points, Multiple points in animation perspective, Objects in perspective, Animals in perspective, Human forms in perspective, Cast shadow exercise, Shapes in perspective with light and shade, Foreshortening, Foreshortening of cylinders, Construction drawing of animals with foreshortened cylindrical forms.

Demonstration and lectures on required skills for an animation artist, Visual and creative development of an artist, How to draw gestures, facial expressions etc.. Introduction to pose to pose sketching (Action analysis). Rapid sketching from live models, Introduction to Acting, Modelling, Sketching from Acting, Sketching from live models, Introduction to Rapid Sketching Techniques, Sketching from Memory, live action. Basics of Acting - Style breaking, Movements. Imagination and implementation - Making gestures, Facial expressions, Acting on small sentences, Acting in couple and acting in group. Acting as story teller - Single act on a song or a small story, Group competition, Usage of Acting into animation - Acting V/s Animation, Tell me the situation, Cat and mouse.

- Introduction to 3d
- Interface to 3ds max
- Basic of 3dmsx modelling
- Exporting the man interface
- The Interface Element
- Using the Menu
- Using the tool bar
- Learning he main tool bar
- Viewing the floating tool bar
- Viewing the view port
- Using the command Panel
- Working with rule outs/
- Interesting the command panels width
- Rearranging the interface for lefties
- Using the know interface bar control
- Using drag and drop features

SECOND SEMESTER

BAM 201	ANIMATION TECHNIQUES	1.0
----------------	-----------------------------	------------

Drawing for Animation, Exercises and warm ups on pegging sheet, Quick Studies from real life, Sequential movement drawing, Caricaturing the Action. Thumbnails, Drama and psychological effect, Motion Studies, Drawing for motion, The Body language, Re-defining the drawings, Introduction to animation production process, Basic Principles in animation, Squash and stretch, Anticipation, Staging, Straight ahead and pose to pose, Follow through and overlapping action, Slow in and slow out, Arcs, Secondary action, Timing, Exaggeration, Solid drawing, Appeal, Mass and weight, Character acting, Volume, Line of action, Path of action, Walk cycles-animal and human.

BAM 202	CREATIVITY – II	1.0
----------------	------------------------	------------

Genesis of creative impulse and giving it concrete form. Overview of writing for different mediums i.e. TV , radio, newspaper and other performing art formats. Basic principles and tools of writing. Role of language.

Introduction to subject, theme, plot. Definition and explanation of story writing. Theory of projection of conflict. Presentation of the plot. Characterization. Case studies with successful writers. Development of story. Basic elements and tools of script writing. Writing for different groups - i.e. children, youth, women and rural population.

Digitization, AV data from tape to computer hard disk. Understanding the playback deck, understanding signal processing of S-video, fire wire and composite video.

Editing Work Station management – disk space & speed requirement. Broadband and streaming video technology. Using Editing Software – editing basics and implementation of various techniques used in non-linear editing. Mastering final edit line – audio levels, colour correction, audio mixing, mixed and un-mixed versions, importing and applying compatible graphics files. Understanding compression and its affects along with various methods.

THIRD SEMESTER

BAM 301	ADVANCED ANIMATION PRINCIPLES	1.0
----------------	--------------------------------------	------------

Timing for inanimate objects, Rotating objects, Spacing of drawings.(General Remarks)
Spacing of drawings, Timing a slow action, Timing a fast action, Getting into and out of holds, Single frames or double frames, Timing an oscillating moment, Bird flight, Other types of animation cycles, Special effects, Flames, Smoke, Water, Rain, Snow, Explosions, Repeat movements of inanimate objects, Accentuating a movement, Strobing, Basic expressions, Lip movement, Key animation, Clean up, Character design, Shapes to define characteristics and attitudes, Different characters –e.g. hero, villain, secondary and incidental characters, Characterization(acting), Change of expression, Look for the contrast, An acting point, Symmetry “OR” Twinning, dialogues in animation-as a part of acting, SUBPOINTS, Phrasing, Picture and sound sync, Accents, Attitude, The secret, Animation with soundtrack, The sound track, Dialogue and voice over.

BAM 302	DIGITAL TELEVISION PRODUCTION	1.0
----------------	--------------------------------------	------------

Basic art of filmmaking using currently available digital software/hardware tools. Overview of preproduction planning- program ideas, production models,
Preproduction & Post-Production activities –
Writing the program proposal, preparing a budget, presenting the proposal, Writing the script, Director’s roles & procedures, Visualization & sequencing, Shooting, Aesthetics of Editing, Role of audio & effects, Mix and composite, source material into a finished fine edit product.

FOURTH SEMESTER

BAM 401	PRODUCTION FOR ANIMATION	1.0
----------------	---------------------------------	------------

Directing and Analyzing a film, Animation film techniques, Film language in action, Adaptation of film language into animation, Student project- Character Designs, Overview, Working with a script/ screenplay, Camera angles, Movements of the camera- Pans, Tilts Truck in and Truck outs, Shots and Scenes, Dramatic effects, Visual language and readability, Visual continuity, Timing the storyboard, Analyze storyboard of a film, Student project- story boarding, Layout and design, Focus on the design of the film, background design and composition as well as camera aspects and film language, Working with storyboard, Field size, Design and rendering the scenes layout and composition, Pans, Trucks and Multiple Pans, Scene planning, Realistic touches; character interaction with the scene and the backgrounds, Analyze film layouts, Design and layouts, clean of up of BGs and BG painting, Sound concepts and effects for the film, The sound track, Sound equipment and theory, Dialogue and Voice-over, Exposure-sheet doping, Break down, reading the sound track. editing- Image and voice, sound FX and Music.

BAM 402	CL ON 3D CHARACTER DESIGN	1.0
----------------	----------------------------------	------------

How to create your own character design on paper using pencil with proper anatomy .Conceptual art to draw side and front views of the character in T pose. Importing the front and side views of the character in 3D. To create the character with proper mesh flow. Detailed modelling of the character body parts such as hands, legs, ears etc. Ideas to generate new innovative characters and discuss their body language as per the rigging needs.

FIFTH SEMESTER

BAM 501	FUNDAMENTAL OF GAME TECHNOLOGY	1.0
----------------	---------------------------------------	------------

Introduction to game engine and its components, game assets. Overview of component interaction inside game engine.

Game theory. The process of game development and its management. Concept of machinima, editing game engine footage.

Introduction to scripting and customizing game engine. Game testing- internal testing, external testing.

BAM 502	DIRECTION FOR ANIMATION	1.0
----------------	--------------------------------	------------

The thought process of a director, Learning to take charge. The director's approach to text analysis and articulation of ideas. Interpretation and critique of scripts and storyboard to develop an over all vision of production. Techniques of set composition , blocking and movement. Time management, rehearsal schedules, staging , scene work . Blending all the theoretical concepts into a practical solution for the problem at hand. Being the king of the set. Managing a creative crew to bring out the director's vision. Leadership.