

B.S.C Multimedia Animation & VFX Subject & Syllabus

First Term	Semester 1	Art History - Multimedia Animation & VFX
		Multimedia Animation & Computer graphics
		Foundation of Arts
		Sketching Fundamentals
	Semester 2	Lab Practice-1
		Lab Practice-2
		Analysis of Form
		Indian Art History
Second Term	Semester 3	Figure Drawing
		Preproduction principles
		Visual Effects Production I
		Color Fundamentals
		Physics for Artist
	Semester 4	Color and Design
		Fundamental of Texture and Shading
		Story Boarding Theory and Principles
Third Term	Semester 5	3D Animation I
		Narrative Story telling
		3D Animation II
		Visual Effects Production II
	Semester 5	Mini Project
		Major Project
		Lab Practice-3
		Myths and symbols

Syllabus

Semester I

Art History - Multimedia Animation & VFX

Unit 1: Art History I

Art Historians, their art styles, mediums and methods of art is not just a great inspiration for next generation upcoming artists but also a power to create something inspirational and legendary. When you know the pioneers work over the period of time you can develop more into the artist side of the industry, which is one of the most expensive market in the world. Art history through 15th century, art history through 19th century and 20th century art study.

Unit 2 Art History through 15th century

In this course, we examine the major period styles of art in Western civilization from prehistory to the late Gothic and early Renaissance periods. Key artists, artwork and art historical language are taught. Students will analyze stylistic and cultural characteristics of art and recognize how historical issues influence artistic development.

Unit 3 Art history through 19th century

This course examines the major period styles of art in Western civilization from the high Renaissance through Impressionism. Students are introduced to key artists, artwork and art historical language. Students will analyze stylistic and cultural characteristics of art and recognize how historical issues influence artistic development.

Unit 4: Art History II

This course introduces art historical methods and historiography, with an emphasis on historical development of current practices, interpretive methodology, critical theory, debates within the field, and cross-disciplinary dialogues. Students will consider the definition of and approach to art-historical problems from late Renaissance to the present.

Unit 5: History of Animation

This course examines aesthetic and technical evolutions in animation in historical context. Students will identify and analyze the work of the creative visionaries, fine artists, and technical pioneers behind classic animated characters such as Bugs Bunny to contemporary animated feature films and beyond.

- Stop motion - in depth understanding and workflow
- 2D Traditional Animation - in depth understanding and workflow
- Oil painting animation - in depth understanding and workflow
- Clay animation - in depth understanding and workflow
- 2D Digital Animation - in depth understanding and workflow
- Animation for Games - in depth understanding and workflow
- Animation in AR - in depth understanding and workflow
- Animation in VR - in depth understanding and workflow
- Motion Graphics - in depth understanding and workflow

Multimedia Animation & Computer graphics

Unit 1: Multimedia Animation I

This course introduces students to the core 3D animation techniques used to make CG animated feature films and VFX work. You will learn how the creation of various types of animation and its many tools and workflows as they are used in major animation and VFX studios, preparing you for specialized study in the track of your choice

Unit 2: Multimedia Animation II

In this course, students recall the principles of animation and apply them specifically to character animation. Students expand their drawn animation skills with a particular focus on volume and form. Expanding student's digital tool repertoire and developing professional studio practices and procedures is also tackled.

Unit 3: History & Technology of Visual Effects & Computer Animation

This class will analyze the history of special effects techniques and apply that knowledge to contemporary visual effects and animation. Starting with in-camera techniques, topics from traditional stop motion, motion control, matte paintings, models and miniatures, to modern computer-generated visual effects and animation, compositing and production methodology will be covered.

Unit 4: History of Visual Development

To create the future of the profession, you must understand the past. You will explore the impact specific designers and artists have had, and see how production techniques, costs, financing, and marketing have evolved over time.

Foundation of Arts

- Live object study with charcoal 20 sketches per month.
- Personalized Colour pallet creation 12 type's artwork in watercolour at the end of the semester.
- Live object study with watercolours 5 fruits, 5 different types of plants, 5 types of leafs, five types of trees submit at the end of the semester.
- Clothed painting 15 various draperies types' submissions at the end of the semester.
- 15 different types of city/village architectural landscape submissions at the end of the semester.
- Narrative art work 20 different subjects given as per the faculty in the class, submissions at the end of the semester.
- Vehicles 15 from different time in the history used by humankind

- submissions at the end of the semester.
- Stylized artwork compositing 10 paintings and sketch and pen or soft pastels or charcoal but output of entirely different styles, submissions at the end of the semester.
 - Five cohesive series of watercolour paintings suitable for exhibition. Demonstrations will include a wide variety of mixed media to complement the watercolour media submissions at the end of the semester.
 - Five compositions done in soft pastel with couple of objects in the frame. Art from live reference and submissions at the end of the semester.
 - Professional art works six submissions at the end of the semester.
 - Same compositing painted in three different colour pallet 1 detailed submissions at the end of the semester.

Sketching Fundamentals

- Line work practice submission 200 pages front and back per month
- Circles of different shapes and sizes practice pages 100 per month submission.
- 1-point perspective 100 sketches at the end of the semester.
- 2-point perspective 50 sketches at the end of the semester.
- Chair in 2-point perspective.
- 3-point perspective 10 sketches at the end of the semester.
- 4-point perspective 5 sketches at the end of the semester.
- 5-point perspective 2 sketches.
- Drawing of a tyre in 2-point perspective 2 submission one eye level and another one topview.
- Pencil shading assignments 15 sketches per month.
- Live object sketching five from live references.
- Live environment sketches five at the end of the semester.
- Five different sketching techniques object drawing at the end of the semester.
- Architectural structure of various types in student has chosen methods, medium and technique 15 at the end of the semester.
- Creative narrative visual communication on random 15 topics at the end of the semester.

Semester II

Lab Practice-1

- Brochure design for a college/educational institute 5 detailed submissions at the end of the semester.
- Bill book design in vector based software of student's choice. Four design by the end of the month.
- Magazine columns showing information and articles content in a vector based software.
- Magazine layout as per class faculty's requirements 2 submissions.
- Pamphlet design for five different types of businesses or institutions.
- Artwork showing today is all subjects issues, integrative visual communication social awareness submissions 10 ideas submissions at the end of the semester.
- Four Different colour schemes in 1 standard concept explaining the process behind it submissions at the end of the semester.
- Leaflet/Flyer designs of four different concept brands submissions at the end of the semester.
- Product design for a product. Complete commercial digital art works. Five pages of explain the product and its design and its idea behind it.
- Designing logos, defining reasons behind the shape, colour, and placement artwork style behind it. 10 logos traditional artwork behind it of two pages for each logo. 30 pages submissions at the end of the semester.
- Narrative art work aiming a particular audience. Five art works in different styles submissions at the end of the semester.
- 50 abstract digital artwork submissions at the end of the semester.
- 50 compositions of shapes submissions at the end of the semester.

Lab Practice-2

- Photoshop image retouching effects 15 assignments of human photograph/still.
- Digital Colour pallet as per mood board. 5 Moods and 3 pallets each submissions at the end of the semester.
- Image manipulation in photo shop, different layer merging effects. Five submissions at the end of the software.
- Creating advertisement for three different food brands, 5 advertisements of environmental social topics and 10 advertisements daily used products. Submission at the end of the semester.
- Five Logos in Corel Draw, 5 logos in Illustrator and 5 logos in photo shop submissions at the end of the semester.
- Contradict visual art works 10 submissions at the end of the semester.
- Complete digital marketing content for students own imaginary created product. 15 pages submissions at the end of the semester.

- Five Visiting card designs in a student's choice vector based software and five visiting card designs in photo shop submissions at the end of the semester.
- Problem solving artwork 15 submissions at the end of the semester.

Analysis of Form

- Study of different 50 types of big size trees and its form analysis, detailed submissions at the end of the semester.
- Detailed study of basic form like sphere, cube, pyramid, cylinder etc.
- Form analysis study of mountains and its formations. Its detailed study of getting the texture right on to the sketch.
- Flower forms of five different types in shading styles of student's choice style of artwork submissions at the end of the semester.
- Realistic drawing showing form analysis 50 sketches per month
- Light and shadow 20 sketches demonstrating different angles of light on the object submission per month.
- Heightened realism in artwork 5 sketches submissions at the end of the semester.
- Shadow utilizing 5-value system sketches 6 in detail submissions at the end of the semester.
- In depth study of classical drawing assignment as per faculty in the class suggests. Six sketches submissions at the end of the semester.
- Human muscle form analysis with the shadow, soft edges shading of 200 muscles sketches submissions at the end of the semester.

Indian Art History

Unit 1: Indian Art History I

Indian artist styles historically followed Indian religions out of the subcontinent, having an especially large influence in Tibet, South East Asia and China. Indian art has itself received influences at times, especially from Central Asia and Iran, and Europe. In historic art, sculpture in stone and metal, mainly religious, has survived the Indian climate better than other media and provides most of the best remains. Many of the most important ancient finds that are not in carved stone come from the surrounding, drier regions rather than India itself. Indian funeral and philosophic traditions exclude grave goods, which is the main source of ancient art in other cultures..

Unit 2: Indian Art History II

In Depth, study of various famous and most ancient art forms that exists in India. Knowing the each art style from different time era. Warli Art, tie dye art, carving art, Screen painting, cave painting, bamboo art etc.

Unit 3: Mythological characters

Indian mythological characters are numerous and have great deal of characteristics as well as superpowers. A great sense of existence of the characters and their amazing back-stories. This will not only give students a great deal of library for script writing, character development, and story writing. Devas, Asuras, Dummy Gods, Animal gods etc.

Unit 4: Mythological Environment

In the world of fantasy and imaginary, it is the biggest plus point to have as many and as versatile environment reference library. By giving this module, we are giving a great deal of visual library to our students where they can mix and match or pick up few elements from variety of mythological environments of India.

Semester III

Figure Drawing

- 10 poses every day submission at the end of the semester.
- 50 extreme poses could be in extreme perspective either as well submission at the end of the semester.
- 8.5 head super hero character figurative study with different body proportions in cylindrical form 20 submission at the end of the semester.
- 3.5 head character figurative drawing study 20 submission at the end of the semester.
- Clothed figurative drawing with proper drapery shading or flow.
- Human anatomy study sketches 50 submission at the end of the semester.
- 3D Volumetric figurative sketches 30 submission at the end of the semester, poses as per faculty assessment in class.
- 5 minutes quick figurative live drawings 200 submission at the end of the semester.
- Shading on 3D volumetric figurative drawings, 10 sketches submission at the end of the semester.
- Small thumbnails in the page filled. Each thumbnail with line of action of 1 or 2 or 3 characters. Connecting the motion of the characters in synchronicity as the thumbnails proceed on the page. 5 pages with different motion in the line of action synchronicity, submission at the end of the semester.

Preproduction principles

Unit 1: Computer Animation Production

This course introduces students to the core 3D animation pipeline workflow used to make CG animated feature films and VFX work. Introducing to biggest software production in a animation and VFX studios and its many tools and workflows as they are used in major animation and VFX studios, preparing you for specialized study in the track of your choice.

Unite 2: Preproduction Principles

This course will provide students with an introduction to professional preproduction with an emphasis on idea generation, concept design, visual development, and storyboarding. The latest techniques of preproduction as used in animation and VFX will be introduced to students.

Unite3: Production Principles

Students learn and drill in design fundamentals for both 2D and 3D game play such as risk and reward, level layout and flow, balancing compelling game play, technical scripting and building suspense through story. As students' progress, they learn specialized aspects of design such as monetization, unique control types, and rapid development via iteration and production methods working.

Unit 4: Producing for Animation and Visual effects

In this course, the business of pre-production management in feature animation, game and post- production visual effects entertainment project workflows will be introduced. Students will be trained in the professional practices entailed in the start-to-finish cultivation and delivery of entertainment projects. Students will receive hands-on training by selecting and producing several commercial projects during the semester.

Visual Effects Production I

- VFX Rotoscopy on 35 footages of minimum 1-minute submission at the end of the semester.
- Stereo rotoscopy of 15 footages submission at the end of the semester.
- VFX paint 10 footages prop paint. High end output 2-pixel submission at the end of thesemester.
- Video editing with several types of videos. Music video, advertisement video, movie trailer video, educational e learning video and shot film video editing. Each type 5 video editing versions with different treatments.

- 2D advertise concept, movie concept illustration using After Effects and Photoshop.
- Five different environment camera projection shots. Submission at the end of the semester.
- 25 high resolution highly camera jerk footages camera track submission at the end of the semester.
- Compositing for post-production, as given the assignment in the class 4 video compositing submission at the end of the semester.

Color Fundamentals

Unit 1: Colour and Design Application for Animation

Students will study existing industry design to understand Art Direction for animated films. They will study application of value, color, and lighting. Using traditional and digital media, students will examine the psychology of color, how light effects color, and various color theory combinations to create interesting visual hierarchy in composition.

Unit 2: Colour, Perception and Space

This course explores concepts of colors, perception and space with respect to art, art history and fine arts. Students will examine these concepts through various media, including painting, photography, model-making and written assignments that analyze the representational, theoretical and practical applications of color, culminating in a final project that challenges spatial perception.

Unit 3: Colour Science and Fabric Technology

Discover the ways fabric and color interact in the character development developer. You will learn to identify important fabrics and investigate major color concepts with fabric, so you can make informed color choices for designs or other future work.

Physics for Artist

Projects will be graded on the following criteria:

Ability to adhere to project requirements, Comprehension and demonstration of discussed Principles and Elements of Design, development of technical skills, creative solutions to design problems, and professional presentation.

Semester IV

Color and Design

- Acquire knowledge and vocabulary of the colour wheel and the visible light spectrum.
- Understand the three characteristics of colour: hue, value, and intensity.
- Formulate a range of colour schemes.
- Identify and apply the elements and principles of design.
- Display professional, designer-level artisanship & eye.
- Use of colour and experimenting with colours to display out of the box colour schemes.
- Various types of theories of colour

Fundamental type Texture and Shading

- Students will be able to create their own product shoot with their phone camera and display their learnings in the class.
- Complete knowledge of how different materials behave with different lighting conditions.
- In-depth knowledge on type of textures like water, glossy, matte, reflective & non-reflective surfaces and objects.
- Applying real references and taking reference photos of the same object in the day during different lighting conditions.
- Understanding shading and lighting industry terminology and then applying them on class assignments.
- This class will develop the student's eye to be more aware of their daily objects and lighting conditions. Which will make them a better artist when it comes to selecting materials and lights.

Story Boarding Theory and Principles

Unit 1: Basics of Storyboarding

Before making any movie, short film, gaming development or even an advertisement. A series of small thumbnails roughly understands, deciding the position of the objects in the frame, character position and camera moment. Basic knowledge of creating a storyboard for a short film will be studied in detail in this module.

Unit 2: Storyboard Integrated Advertising 2

This course introduces students to the rapidly developing world of online ad units. The course will focus on developing concepts for and executing rich media in a demo format. Creative briefs, storyboards, and Flash demo techniques will be utilized to bring students' ideas to life.

Unit 3: Preproduction Principles for storyboarding

This course will provide students with an introduction to professional preproduction with an emphasis on idea generation, concept design, visual development, and storyboarding. The latest techniques of preproduction as used in animation and VFX will be introduced to students.

Unit 4: Storyboarding 1: Camera Language & Animatic

This course introduces students to the fundamentals of professional storyboarding. Topics covered include story development, camera language, stages in storyboarding, preproduction packets, and pitching. Address the basics of compiling and editing animatic and story reels are.

Unit 5 Storyboarding 2: Drawing for Cartoons

In this course, students will create storyboards for the fast paced cartoon production environment of an animated series. Students will watch shows, study scripts and create original works.

3D Animation I

Unit 1: Stretch and Squash

Basic Exercise to truly understand the Animation Principles- Simple Bouncing Ball Students will learn basics of how to use graph editor in Maya to understand relationship between time and space. This class will give full understanding of using all the three axes (X, Y & Z)

Unit 2: Timing and Spacing

Animating a ball/ made of different material/s, surface/s and texture/s - Metal, Rubber, Plastic, and Wood. Follow Through, overlap, Animate a Ball with a tail (like a Squirrel) etc.

Unit 3: Arcs and Exaggeration

Animating different ball/ made of different material/s, surface/s and texture/s Wood, Ping Pong, at the same time. Animating collision between two or more different bouncing ball in a environment in side view

Semester V

Narrative Story telling

Unit I: Introduction to narrative story telling

Narrative storytelling techniques are the method and means behind interesting narrative stories. Techniques as if point of view, flashbacks, foreshadowing and tone all move the narrative process along, propelling the reader through completion of the story. These and other narrative techniques ground the reader in the current story while creating a framework and means of connection with other works that leaves a lasting impression long after the story is done.

Unit II: Point of View

Point of view is the perspective the author chooses to use when writing a story. POV determines who is telling the story and how it is being told. First person or direct narration is told from the point of view of the storyteller. Third person omniscient or frame narration allows the reader to see the viewpoint of all individuals in the story; including information, other characters may not know. Most narratives will maintain one POV throughout the entire story, but some authors use POV shift as a writing technique to provide the reader with information that is more detailed or a different understanding.

Unit III: Flashback

A flashback reveals something about the story or characters that the reader does not know. Flashbacks often set up events that will occur in the story or explain a character's motives based on past behaviour. Toni Morrison employed flashbacks heavily to explain the death of Sethe's children in the novel "Beloved," information not otherwise shared in the story. Flashbacks can provide important background information that can both clarify and move the story forward, as long as they do not confuse the reader.

Unit IV: Foreshadowing

Foreshadowing is a technique used to hint at things to come. The purpose is to create tension within the reader by insinuating possible scenarios for later use in the story. For example, a suicidal individual who discovers a hidden gun early in the story plants a seed in the reader's mind about its ultimate use. Foreshadowing can be a useful technique to suggest situations for later resolution.

Unit V: Tone

Tone is the way in which a writer expresses himself in a story, using diction or word choice and imagery. Often authors convey tone through the style of their writing, such as Voltaire's use of satire in "Candide" or Steinbeck's derisive tone through the character of "George" in "Of Mice and Men."

Tone helps the author communicate his feelings toward particular issues and regarding certain characters. This in turn helps the reader determine how to feel about the subject matter.

3D Animation II

- Polishing final animation for demo reel.
- Polishing final lighting scenes for demo reel shot compilation.
- Advance texturing in Mari / substance painter or mud box.
- Rendering multiple passes with Maya for advance compositing
- Demo reel shot polishing, shot finalization sequence wise, and shot wise.
- Final demo reel assessment from industry experts
- Final compositing with effects and if any CHF of the demo reel

Visual Effects Production II

- Familiarize the different types of splines used in various rot scoping software. 10 footages done in Nuke submission at the end of the semester.
- Human, animal, and working on details. 10 footages done in Nuke submission at the end of the semester.
- Understand masking of cloth and working with secondary motion 5 footages submission at the end of the semester
- Final Image Manipulation and Compositing submission at the end of the semester.
- The Integrated Matte Channel, Masks, Compositing at footages the end of the semester.
- Temporal Resolution, Temporal Artefacts,
- Changing the Length or Timing of a Sequence,
- Key Framing 5 submissions creation and manipulation 5 submissions at the end of the semester.

Mini Project

- Understanding on how to cut and edit the best demoree material
- How to collect all traditional artwork & digital artwork for getting ready to prep for Demo reel.
- Digitally scan or photograph of artwork. How to set the correct lighting while capturing art. Artist will use lights and camera to photograph their work Demo reel.

- Artist will make a rough storyboard of their edit on how they want to display their work, starting with their best digital artwork or animations first and then their traditional artwork.
- Every three weeks artist will keep making changes to their edit for timing and selecting correct background music for their final Demo reel.
- Students have to submit a rough Demo reel with correct edits, timings, transitions and overlays to lock for final edit.
- Students will have to do a final submission of their reel, which will be graded on how they can move to their industry professional driven Demo reel II class, which will be a advanced class for seniors

Semester VI

Major Project

- Understating basic to advance editing techniques.
- Industry terminology for editing and filmmaking process.
- Planning your edits and shots as per story and story beats.
- Choosing the correct sound also for background music.
- How transitions make and break your edit, using the correct transitions to narrate your story.
- Full knowledge of all types of cuts and tricks used to make your edits more dynamic than others
- Creating your first edit from existing movie and using basic cut tools to create a 30-60 sec trailer without any sound or music.
- Making a short 15 sec product movie edit by using your phone and household objects.
- Shoot and edit your own teaser for a movie, only using original footage of video along with your own background sounds for every shot. This video will have no dialogue.
- Editing a 60 sec video into a trailer for animation movie and use of transitions on how to tell a better story through your editing skills.
- Final assignment will do to edit a music video with your own style with use of original soundtrack to make a complete assignment.

Lab Practice-3

- Working on the final demo reel. Starting with last assignment from Demo reel class me.
- Preparing for the final edit, student will have to put own idea and resume across and design the stationery of their own.
- Final edit of the demo reel ideas will then be presented to class for critic and feedback from others and the instructors.
- Students will then present this to an industry professional for final feedback and changes to the demo reel.
- Students have to show at least three different versions for instructor to select a final one.
- The final edit will go through several changes before its final submission. Student will have to be responsible to finish the demo reel with sound and any other effects and transitions.

Myths and symbols

Unit I: Fundamentals of Myths and Symbols

This course focuses on diverse cultural mythologies and their symbolic representations. Students learn to recognize the myths and symbols prevalent in modern society and to identify these themes within their own work.

Unit II: Power of Indian Myths and Symbols

Gods, Goddesses, and their avatars, their wahans, mythical legendary stories, the time line they were seen/been on this earth. Relating all that to a fictional subject will empower student's artistic and purely creative side, which is most needed in this industry.

Internship Details

Industry Internship / Research Projects shall be an essential academic requirement for the students. Each student needs to spend 48-50 weeks during the course of study in the Studio / Industry. Satisfactory completion of Internship is required to be declared successful in course of study and award of the degree.

Every student enrolled to the B.Sc. Multimedia Animation and VFX programme must complete the assignment under the supervision of an Instructor.

The Instructor of the course shall be responsible for determining the procedures for completing assignments and assessing student achievement each student's assignment will be communicated in advance.