

DEPARTMENT OF ANIMATION &  
MULTIMEDIA  
**BMM –Animation & Multimedia**  
**U.G. PROGRAMME**  
**SYLLABUS**

Effective from the Academic Year 2016-2017



**Loyola College (Autonomous)**  
**Chennai- 600 034**



**BMM -ANIMATION & MULTIMEDIA  
2016-19**

<b>S No</b>	<b>Subject Code</b>	<b>Subject Title</b>
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2	16UMM1MC02	GRAPHIC DESIGN AND MULTIMEDIA
3	16UMM1MC03	CONCEPT DEVELOPMENT
4	16UVC1AL01	ANIMATION FIGURE DRAWING
5	16UMM2MC01	2D ANIMATION AND CARTOONING
6	16UMM2MC02	MODELING FOR ANIMATION
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8	16UMM3MC02	CHARACTER DESIGN - 2D AND 3D
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## 16UMM1MC01 PRINCIPLES OF ANIMATION

Semester : I

Credits : 3

Category : MC

Hours/Week : 3

### Objectives:

1. To provide an overview of the history of Animation
2. Introduction to the fundamentals of Animation - Traditional Animation to CGI Animation till date, Types & Principles of Animation

### Content:

#### **Unit-1: Introduction to Animation & History of Animation:**

What is Animation, History of Animation – Starting from Early approaches to motion in art, Animation before film, Traditional Animation – The silent era, Walt Disney & Warner Bros., Snow White & the seven dwarfs, The Television era, Stop-motion, CGI Animation - till date. Different Types of Animation:

1. Traditional Animation - Cel Animation or hand drawn Animation
2. Stop Motion Animation – Puppet Animation, Clay Animation, Cut-out Animation, Silhouette Animation, Model Animation, Object Animation etc.
3. Computer Animation – 2D Animation, 3D Animation

**Unit-2: The 12 basic Principles of Animation:** The basic rules of animation including Squash and stretch, Anticipation, Staging, Straight Ahead Action and Pose to Pose, Follow Through and Overlapping Action, Slow In and Slow Out, Arc, Secondary Action, Timing, Exaggeration, Solid drawing, Appeal

**Unit-3: Timing for Animation:** Ease in & Ease out, X-Sheet handling, Field Chart usage, Camera Panning, Zoom-in & Zoom-out, Cut-shot, Dissolve transform, trick shot, hook-up shot etc. How to create hook-up poses for animation. How to use camera angles to emphasize performance



**Unit-4: Animation Production Process:** Understand Animation Requirements, Basic steps in Pre-Production, Production and Post-Production.

**Unit-5: Basic Traditional Animation Samples:** To apply the principles of animation, Posing and character emotion. How to observe and study human behavior and expressions to help visualize concepts. How to enact and emote. Sample animations - Bouncing Ball Animation, Walk Cycle, Run Cycle, 4 Leg Walk cycle, Fly Cycle

**Assignments:**

Flip book animation, Cel animation samples - Bouncing Ball, Walk cycle etc. Animation Movie Studies – Analyzing Traditional Animation Movies – Snow White and Seven Dwarfs, Bambi, Pocohontas, Mulan, Prince of Egypt etc.

**Methodology:**

Extensive Theory & Practical sessions, Drawing Sessions, Traditional Animation Sessions using Light-box, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits, Movie Showcase

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

**Reference Books & Online References:**

1. The Illusion of Life: Disney Animation - Frank Thomas and Ollie Johnston
2. Cartoon Animation - Preston Blair
3. The Animator's Survival Kit - Richard Williams
4. History of Animation - [https://en.wikipedia.org/wiki/History\\_of\\_animation](https://en.wikipedia.org/wiki/History_of_animation)
5. Principles of Animation - [https://en.wikipedia.org/wiki/12\\_basic\\_principles\\_of\\_animation](https://en.wikipedia.org/wiki/12_basic_principles_of_animation)



6. YouTube Video -

<https://www.youtube.com/watch?v=haa7n3UGyDc&feature=youtu.be>

## 16UMM1MC02 GRAPHIC DESIGN & MULTIMEDIA

Semester : I

Credits : 3

Category : MC

Hours/Week : 3

### Objectives:

1. To provide an overview of Drawing and Design & its Principles
2. Understanding of Computer Graphics & Multimedia
3. Introduction to the basics of Software Packages for Design.

### Content:

**Unit-1:** Principles of Drawing - Introduction to Drawing, Various drawing mediums, Sighting & Measuring objects, Skills in Composition, Thumbnail sketches, Form, Overlapping, Size & Space variation, Free flowing designs, Geometric Designs

**Unit-2:** Elements of Design & Principles of Design: Elements of Design - Dot, Line, Shape, Value/Tone, Texture, Space, Color. Principles of Design - Balance - Symmetrical or Asymmetrical, Repetition / Rhythm, Focus / Emphasis / Dominance, Unity / Harmony, Scale, Proportion, Contrast, Movement, Depth.

**Unit-3:** Composition and Concept Creation - Picture Plane, Closed & Open Composition, Gestalt, Positive & Negative Space, Point of View. Concept Creation based on the Elements and Principles of Design

**Unit-4:** Introduction to Computer Graphics / CGI & Multimedia: What is Computer Graphics?, What is Multimedia?, It's Applications – Presentation Graphics –



Resolution and File Formats, Web /Mobile based categories, Computer Aided Design (CAD) in Education, Training, Entertainment etc. Design Standards and Specifications - Including their Final output Formats, Input and Output Devices, Digital Image Editing.

**Unit-5:** Introduction to Graphics Software - How to work with graphics software including Adobe Photoshop, Adobe Illustrator and understand their specifics

**Assignments:**

Concept Designs in color, Abstract designs representing Principles & Elements of Design, CGI - Software outputs

**Methodology:**

Extensive Theory & Practical sessions, Drawing & Coloring Sessions, Computer Lab sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

**Reference Books & Online References:**

1. Rawson, Philip, “Design, Prentice Hall, 1987.
2. Bryson, Norman, Ann Holly, Michael, Moxey, Keith, “Visual Theory: Painting and Interpretation,” Harper Collins, 1991.
3. Rose Gillian, “Visual Methodologies, “Sage, 2006.
4. Sturken, Marita, “The Practices of Looking,” OUP, 2009.
5. Cooper, Alan et.al, “About Face: The Essentials of Interaction Design,” Wiley, 2007.
6. Computer Graphics and Multimedia - [http://www.academia.edu/6709255/LECTURE\\_NOTES\\_on\\_Computer\\_Graphics\\_and\\_Multimedia\\_Table\\_of\\_Contents](http://www.academia.edu/6709255/LECTURE_NOTES_on_Computer_Graphics_and_Multimedia_Table_of_Contents)



7. Graphic Design -  
<http://www.slideshare.net/AfshanKirmani/an-introduction-to-graphic-design-presentation>
8. Multimedia -  
<http://www.slideshare.net/kenshin1017/introduction-to-multimedia-4663053>
9. Elements & Principles of Design -  
<http://teaching.ellenmueller.com/drawing-i/resources/elements-principles-of-2d-design/>
10. Design Principles - [http://www.design-skills.org/design\\_principles\\_guidelines.html](http://www.design-skills.org/design_principles_guidelines.html)

## 16UMM1MC03 CONCEPT DEVELOPMENT

Semester: I Credits : 3  
Category: MC Hours/Week : 3

### Objectives:

1. Introduce students to Creative Thinking techniques and involve them in the thinking process
2. Concept Development and Story-telling
3. Creative exercises to equip students on out-of-box thinking.

### Content:

**Unit-1:** Story Telling: Creative thinking techniques and exercises, Teaching students how to narrate a story, How to use real life situations to create a story. Creating a scrap book to record everyday happenings and areas of interest, How to develop a story-plot from the collections.

**Unit-2:** Story-Board Creation: Scripting & Story boarding for animation: Creation and Development. Standard story-board templates and understand the elements in the template. How to include dialogues and Voice and timing to screens.

**Unit-3:** Concept Development - Concept Development and Realization-Concept Generation, Research & Pre-production-





Screen Adaptation: Concepts & Analysis. Creative thinking of concepts and creative assignments

**Unit-4:** Introduction to Creative writing: Writing-Script writing: Techniques, Ideas & Development- Story Design, Analysis, Creative Presentation- Creative Skills Development

**Unit-5:** Creative Thinking Techniques: Different techniques available on Creative thinking lateral thinking like six hats thinking etc.

**Assignments:**

Own story creation, storytelling, Concept Designs in color, Abstract designs based on music, given theme etc.,

**Methodology:**

Extensive Theory & Practical sessions, Drawing & Coloring Sessions, Group discussions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

**Reference Books & Online References:**

1. The New Oxford Guide to Writing- Thomas S.Kane
2. Creating Characters: Dwight V.Swain.
3. The Elements of Style: William Strunk& E.B. White.

**16UVC1AL01 ANIMATION FIGURE DRAWING**

Semester: I	Credits	: 3
Category: MC	Hours/Week	: 6

**Objectives:**

1. To introduce students to the principles of Life drawing by exploring the observation of the human form.



2. Study focuses on the principles of movement, weight, balance, shape, and anatomy through gesture drawing, long form poses, and humans in motion. The practice of observation and application is the foundation from which students apply these principles.
3. Study in shading, shadow, foreshortening, and action analysis further allow students to explore the importance of observing the human form and anatomy.

### **Content:**

**Unit-1:** Basic Life Drawing Skills - Life drawing including human anatomy, emotions, actions and expressions. Stick Figures, Line of action, Basic Human, Animals and Birds Anatomy

**Unit-2:** Basic Perspective Drawings – How to draw Shapes, Buildings and Figures in 1 point, 2 point and 3 point perspectives, Worm’s Eye View, Bird’s Eye View – Out-door study

**Unit-3:** Light & Shade in Drawings – Basic Drawings including Humans, Animals, Birds etc. with Light & Shade, Still-life study

**Unit-4:** Basic Anatomy Drawings - Basic Anatomy Drawings including Humans, Animals, Birds etc. – using Mannequins, Group figure studies

**Unit-5:** Actions & Movements, Emotions, Postures& Gestures in Drawings: Live Action / Motion Drawings including Humans, Animals, Birds etc. Including emotions, actions and expressions, attitude, postures and gestures, Facial expressions

### **Assignments:**

Still Life Study - Shapes, Organic & In-organic studies, Indoor and Outdoor Study, Light & Shade, Perspective and Anatomy.



### **Methodology:**

Extensive Practical sessions, Drawing Sessions, Industry Experts, Assignments, Field Visits for out-door studies – Zoo, Park etc.

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

### **Reference Books & Online References:**

1. Thomas, Frank; Ollie Johnston (1997) [1981]. The Illusion of Life: Disney Animation.
2. Allan, Robin. "Walt Disney's Nine Old Men & The Art Of Animation". Animation World Network.
3. Solomon, Charles, "Enchanted Drawings: The History of Animation". Random House, 1994.
4. Beck, Jerry, "Animation Art: From Pencil to Pixel, The world of Cartoon, Anime and CGI." Collins, 2004.
5. Lotman, Jeff and Smith, Jonathan, "Animation Art: The Early Years 1911-1953" Schiffer, 1995.
6. Lent, John, "Animation in Asia and Pacific." Joan Libbey, 2010.
7. Clements, Jonathan and McCarthy, Helen, "The Anime Encyclopedia," Stone Bridge Press. 2001.
8. Ryder, Anthony, "The Artists Complete Guide to Figure Drawing," Watson – Guptill, 1999.
9. Goldfinger, Eliot, "Human Anatomy for Artists: The Elements of Form," OUP, 1991.8. Rockman, Deborah, "The Art of Teaching Art," OUP, 2000.
10. History of Animation - [https://en.wikipedia.org/wiki/History\\_of\\_animation](https://en.wikipedia.org/wiki/History_of_animation)



## 16UMM2MC01 2D ANIMATION AND CARTOONING

Semester: II Credits : 5

Category: MC Hours/Week : 5

### Objective:

1. To introduce students about the fundamental principles and basic techniques of 2D animation.
2. Students will learn advanced timing and weight through a series of projects designed to demonstrate the principles of animation.
3. Issues such as key framing, in-betweening and cycling will be addressed and reinforced.

### Content:

**Unit-1:** Basic Cartooning: Shapes, Understand Cartoon Characters and their shapes, Analyze different cartoon characters and their attitudes, their relative props, Create your own cartoon character, is turn-around, lip-synch etc. Posing and Character emotion - Attitudes, expressions, poses and gestures, emotions etc.

**Unit-2:** Acting Skills for Animation: How to observe, act and emote. Understand and develop acting skills

**Unit-3:** Story, Voice-Over and Story-Board Creation: Story development, Script Writing, Story-telling, Voice modulation, Acting Skills, Character descriptions, Dialogue Writing, Voice-Over creation, Recording, Scene by scene editing using Sound Forge, What is a Story-Board, Elements in a Story-Board, What is Animatics

**Unit-4:** Flash - BG & Layout Creation: Background Designing, Layout Creation, Over-layers creation in Flash. Learn about vector and bitmap graphics - Flash drawing mode - About overlapping shapes Using Flash drawing and painting tools - Draw with the pencil tolls - Draw straight lines – Reshaping lines and shape outlines - Snapping (object snapping, pixel



snapping, snap alignment) – Working with color, strokes and fills. Selection objects - Moving, copying and deleting objects - Arranging object (Stack, Align, Group, Break apart groups and object) - Transforming object - Using symbols, instances and library assets - Symbols overview - Types of symbols - Create symbols - Convert animation on the Stage into a movie clip .

**Unit-5:** Advanced Flash Animation: Animation basics - Creating motion - Creating key frames - Representations of animation in the Timeline - Frame rates - Frame-by-frame animation - Onion skinning - Extend still images- Mask layers - Using Timeline effects - Twinned animation - Special effects - Filter – Animation Filters - Create preset filter libraries - Blend modes in Flash - Working with text - Working with sound - Working with video.

### **Assignments:**

Animatics Creation with Sound, Character Bible creation, Characters and Props creation in Flash, Background with overlays creation in Flash, Character and Props Rigging, Staging, Character Animation in Flash, Animation with EFX, 2D Compositing in Flash

### **Methodology:**

Extensive Theory & Practical sessions, Drawing Sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

### **Reference Books & Online References:**

1. Welles, Paul et al. Drawing for Animation, Ava Publishing, 2008.
2. Chong, Andrew, Digital Animation, Ava Academia, 2008.



3. Welles, Paul. Fundamentals of Animation, Ava Publishing, 2006.
4. Williams, Richard. The Animator's Survival Kit, Faber, 2001.
5. Welles, Paul. Basics Animation: Scriptwriting, Ava Publishing, 2007.
6. White, Tony, How to Make Animated Films, Focal Press,(recent edition)
7. Peaty, Kevin and Kirkpatrick, Glenn, Flash Cartoon Animation, Freindssoft,2002

## 16UMM2MC02 MODELLING FOR ANIMATION

Semester: II	Credits	: 6
Category: MC	Hours/Week	: 6

### Objectives:

1. To provide an overview of clay-modeling & stop-motion animation
2. Understanding the process of clay-modeling & stop-motion animation
3. Introduction to techniques of clay-modeling and software for stop-motion animation

### Content

**Unit-1: Basics of Clay Modeling:** Model from a still life set-up in the classroom, a sculptural equivalent in clay, emphasizing inter-relationships of form, space and surface.

**Unit-2: Types of Clay Modeling:** Create different characters in clay modeling, Cartoons, human figures, Animals, Props etc. Preparation of a prototype work product/pre-visualisation for review. Preparation of the following stop motion animation end-products: Film, Television series, Advertisement, Education content. Application of the following stop motion animation techniques:

- Traditional frame-by-frame capture



- Claymation
- Cut-out
- Using Computer-generated tools

**Unit-3: Process and techniques of stop-motion animation:**

Camera angles, Character positioning, Frame by Frame controls, Positioning and actions of secondary characters and Props. Clay Modeling Techniques: Sculpting tools handling, Clay handling techniques, Analyzing and understanding the challenges faced during clay modeling and shooting, Props & lip-synch handlings

**Unit-4: Concept Creation for clay modeling:** How to create your own concept, understanding the limitations and challenges of the medium, Creation and Execution of the concept

**Unit-5: Introduction to stop-motion animation software:**

Introduction to available software for Stop-Motion Animation, Learning to use Monkey Jump Software

**Assignments:**

Use clay to create a stop-motion animation, use objects like coins, puppets, marbles, toys and mannequins to create a stop-motion animation

**Methodology:**

Extensive Practical sessions with required theory classes, Drawing Sessions, Sculpting using clay, Studio Practice, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

**Reference Books & Online References:**



## 16UVC2AL02 PHOTOGRAPHY & VIDEOGRAPHY

Semester: II  
Category: MC

Credits : 3  
Hours/Week : 6

### Objectives:

- To introduce basic knowledge in photography. Introduction to Camera, and its functioning and other technical information. To enable students to understand the concept and techniques behind photography.
- History of photography and some of the best photographers and case studies. Course briefs about Framing and conditions suitable to capture best images.
- To enable students to visualize creative photographic ideas and concepts which would serve as contents for their later Photographic projects
- To offer technical knowledge in videography. It briefs about the camera, its function, lenses, filters, lighting devices etc. Apart from technicalities it also offers knowledge in image capturing methods, narration, documentation etc. It also brings knowledge in video and audio editing.

### Content

**Unit-1: Photography History:** Introduction to Photography - History and evolution. To discuss some of the best photographers and their works. Early pioneers and experiments – Joseph Nicephore Niepce, Louis Daguerre and Eadward Muybridge

**Unit-2: Photography Basics:** Differences between analog and digital photography, parts of analog and digital cameras, types of analog and digital cameras. Camera - structure and function of camera. Exposure – focusing, aperture, shutter speed. Depth of field. Types of Films and film speeds, Photography Paper - developing and printing Accessories used in photography Digital photography, optical system, power system, memory storage, resolution. Understanding exposure and controls, Flash





and lighting. Transferring images to PC file formats, managing digital pictures. To create a portfolio on different themes using the above knowledge. To understand the basic principles of Art photography, Commercial photography, journal photography and exercise.

**Unit-3: Lighting & Composition Techniques:** Characteristics of light, Spectrum. Types of cameras - Lenses and their function. Types of lenses and their use. Characteristics of lens, lens speed, covering power and other features. Lighting techniques, Types of lighting - indoor and outdoor - sources of studio lighting - Electronic flash and artificial lights, Light meters, filters, flash modes and color temperature. Different kinds of light 'T' or B& \V and color photography. Elements of composition, framing, rule of third, decisive movement, metering, white balance and exposure modes.

**Unit-4: Photo Editing & Image Processing:** Stages in analog and digital processing, grains and pixels, silver halides and sensors, film and file formats, ASA/DIN and JPEG/Raw. Image editing techniques using Photoshop

**Unit-5: Video / Audio Editing:** Sound Basics- Film Sound appreciation, Sound Track analysis. Editing Basics Fragmentation Juxtaposition: Frame, Shot, Sequence, Scene Time, Pace, Rhythm Mise-en-scène Montage. Practical Voice Over Exercise – Learning basic editing software and primary editing on available/given materials (silent rushes)

### **Assignments:**

In-door Study & Outdoor Study, Light & Shade, Perspective and Composition. Portrait studies, Real life Photographs and videos.

### **Methodology:**

Extensive Practical sessions with ample theoretical inputs, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits



### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks  
External 50% - Semester Examination – Theory & Practical – 50 Marks each

### **Reference Books & Online References:**

1. The Photographer's Eye: Composition and Design for better photography... by Michael Freeman.
2. Bordwell and Thompson, Film art: An introduction
3. Bill Nichols, Movies & Methods
4. J. J. Langford, Basic Photography .
5. Joseph V. Mascelli, Five Cs of Cinematography

### **16UMM3MC01 3D SET-MODELLING**

Semester: III Credits : 5  
Category: MC Hours/Week : 5

### **Objectives:**

1. The objective of the subject is to impart the skills to visualize objects in 3D and also to learn the methodologies of creating 3D environments.
2. To make students understand the detailed process of 3D modeling, Texturing, Lighting and Rendering involved in the created models

### **Content:**

Unit-1: Introduction to 3D Software: Introduction to Blender, 3d Studio Max. Basics of Autodesk Maya, 3D Output and delivery formats, Autodesk Maya will be used as a tool for 3D. Compositing / Miniature setting - Models – How to draw Set models, Create various set locations – Village, City, Under water, Forest, Park, Zoo etc. as drawings, Create props for the chosen locations. Introduction to Maya interface: Being familiar with Maya viewport, user interfaces, status line, shelf, layers, channel box, etc.



**Unit-2: 3D Set Modeling: Concept of 3D modeling:** Understanding the 3 Dimensions, Isometric & Orthographic projection, 3D space, difference between 2D & 3D and xyz coordinates. Introduction to modeling tools; Introducing tool box, basic primitives, Mesh, edit mesh, outliner, pivot point etc.; Introduction of different types of modeling geometries; Establishing different type of geometries, nature of difference meshes and advantage and disadvantage of these geometries.

**Unit-3: Texturing – Understand texturing and Apply texture for the created models. Introduction to texturing:** Explaining UV resolution settings, and how to capture a UV snapshot from Maya UV, texture editor, and getting in to paint software. Working with UV tools & techniques: Understanding the UV Texture editor and technique of how to cut, merge, relax, unfold, and layout the UVs. Techniques of texture mapping, projection and managing texture seams. How to apply color effects such as color tones, textures, matte etc. Properties of different types of surfaces such as wood, glass, plastic, leather, metal etc. and native materials for rendering (for Vray, MentalRay etc.)

**Unit-4: Lighting & Compositing:** Understand Tools for lighting and apply lighting for the created models. Lighting Concepts - Outdoor lighting ,indoor lighting, product lighting. Lighting properties and concepts like three point lighting, Blinn, Lambert, transparency, self-illumination, glow, bump, displacement, reflection, refraction etc. Techniques and workflow of UV mapping. How different types of surfaces react to varying lighting conditions. Understand Tools for Compositing for the created models.

**Unit-5: Rendering – Understand Rendering in order to achieve the desired 3D output for the created models. Essentials of rendering - Types of rendering engines - Using the Render Settings Window- Image & Video formats Resolution,**



### **Assignments:**

Set Model drawings, Props creation - Chosen Environment – Forest, City, Village etc., Furniture Models, Room Model with objects, Over-layer handling, Set model creation in 3D with texturing, lighting. Experiment exercise on unwrapping techniques using a simple model. How to create photo-realistic textures consistent with the creative look of the production.

### **Methodology:**

Extensive Theory & Practical sessions, Drawing Sessions, Guest Lectures, Industry Experts, Assignments, Industry Visits. 3D Animation Movie Studies – Analyzing 3D Animation Movies – Toy Story, Tangled, Rio, Up, Rango etc.

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

### **Reference Books & Online References:**

1. DariushDerakhshani, “Introducing Autodesk Maya 2015, Jon Wiley & Sons, (2014).
2. Maraffi, Chris (2004). Maya Character Creation: Modeling and Animation Controls. New Riders.
3. Animation from pencils to pixels: classical techniques for digital animators, Tony White ISBN-10: 0240806700
4. 3D Automotive Modeling: An Insider's Guide to 3D Car Modeling and Design for ... By Andrew Gahan
5. Introducing Autodesk Maya 2012 ByDariushDerakhshani.
6. Wright'sCompositing Visual Effects: Essentials for the Aspiring Artist [Paperback]2007) - Paperback (2007) by S.Wright
7. Compositing Visual Effects – Essentials for aspiring artists, Steve Wright
8. Modeling, UV Mapping, and Texturing 3D Game Weapons By Christian Chang, Luke Ahearn



9. Maya Studio Projects: Game Environments and Props  
By Michael McKinley

### **16UMM3MC02 CHARACTER DESIGN – 2D & 3D**

Semester: III Credits : 4

Category: MC Hours/Week : 3

#### **Objectives:**

1. To enable students to understand and create different characters and environments, with a focus on robotic, futuristic, outer space, mechanical and automobile areas.
2. Study and Creation of Characters in 2D & 3D with respective environment
3. Creating the Character Bible

#### **Content**

**Unit-1: Advanced Drawing Skills:** Advanced Figure Drawing, Anatomy Drawings including Humans, Animals, Birds etc. – using Mannequins, Group figure studies, different approaches to composition in figure drawing

**Unit-2: Introduction to Character Designing:** Introduction to character designing, Various character study with backgrounds and Props, Understanding Model-sheets, Lip-synch, Poses. Creating own Character Design: Creating your own character design its relative environment and props, Create accurate and aesthetically appealing character design. Character's look, colors, dressing, attitude and behavior. Character expressions, emotions, poses. Character movements (e.g. walk, run, jump etc.) and timing (acting and body mechanics) and Shadow

**Unit-3: Creating Character Bible:** Character turn around, Lip-synch chart, Attitude chart, Expressions chart, Size-relation chart, Describe characteristics of well-designed and executed characters



**Unit-4: Convert 2D drawings to 3D Models:** Create 3D models based on the 2D drawings – Character models, backgrounds and props. Rigging of the created 3D Models: Rigging the created 3D models to get ready for animation.

**Unit-5: Staging:** Creating the staging for the created characters, Camera Locking (like Animatics)

**Assignments:**

Create your own Character in 2D with the character bible. Convert the 2D drawing to a 3D Model and Rigging of the created model

Methodology:

Extensive Theory & Practical sessions, Drawing Sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

**16UMM3MC03 FILM NARRATIVE STRUCTURE**

Semester: III

Credits: 3

Category: MC

Hours/Week : 4

**Objectives:**

- To impart basic knowledge about Film making. Introduces History, Film language, Film Grammar etc
- To empower students to create a Short Film of their own

**Content**

Unit-1: History of Cinema Research & Script: A brief history of early evolution of cinema; Era of silent films - Story/script/Story boarding – Introduction to different



approaches in story telling as seen from Live Action, Documentary and Animation. Students will study various films (World Cinemas) and try to understand and analyze the essence of filmmaking. Films from Director's like Satyajit Ray, Vittorio De Sica, and Francis Ford Coppola will be shown and taught to students. Research Finding and Collecting materials and facts related to your story. Where and How to find the materials related to your story. Things to consider before sketching down your story.

**Unit-2:** The History and Evolution of Genres: Study of different Genre Types. Audience-based Approaches, Critical/Ideological Analysis of Genres, Devising Genre-analysis Activities

**Unit-3:** Film Language, Grammar and Analysis: Story / script / Story boarding; Developing Story ideas, designing the Plot, Plot development and Plot devises, Story narration, Character development in the story.

**Unit-4:** Film Grammar & language: Mise-En Scene, Elements of Mise en scene: Representation of space. Set designing – colour design and symbolism in sets – lighting – costume designing - Acting and types of acting

**Unit-5:** Create a Short Film: Case studies/Film viewing and analysis and creating your own short film

### **Assignments:**

Short Film Creation

### **Methodology:**

Extensive Theory & Practical sessions, Group Discussions, Movie previews and analyzing the movie, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks



External 50% - Semester Examination – Theory – 100 Marks

### Reference Books & Online References:

1. The Analysis of Film by Raymond Bellour and Constance Penley (Editor)
2. How to Read a Film: Movies, Media, and Beyond by James Monaco
3. Film Art: An Introduction - Paperback (Nov. 25, 2009) by David Bordwell and Kristin Thompson
4. Film Form: Essays in Film Theory - Paperback (Mar. 19, 1969) by Sergei Eisenstein and Jay Leyda

## 16UCO3AL04 MEDIA MARKETING

Semester: III	Credits :3
Category: MC	Hours/Week :6

### Course Objectives

1. To understand the basic principles of marketing and the evolution of media marketing
2. To provide an exposure to the changing rules of Marketing, and new Media
3. To appreciate practical action plans, applications, and trends in media

### UNIT I: Marketing and the Marketing Process:

Definition of Marketing and Marketing Management - Marketing Process and evolution – Marketing Management orientation - Marketing Plan - Marketing Mix - Consumer and Business Markets – Market Segmentation, targeting, positioning strategies

### Unit II: Changing Rules of Marketing and New media

Old rules of Marketing, PR - New rules of marketing - Convergence of marketing and PR on the web -Reaching Buyers Directly - Tapping product evangelists -Blogs-using





audio and video - viral marketing -content rich websites - marketing and PR real time

### **Unit III: Evolution of Modern Media**

Evolution of Media - Print, Radio, TV, Mobile marketing - Leveraging media to reach customers – New technologies in marketing goods and services, face book, twitter, LinkedIn and others - Media marketing mix- Future of Media

### **Unit IV: Action Plans**

Building a Marketing and PR plan - organizational goals, buyer persona, developing content to reach buyers, marketing strategies, measurements, educating salespeople about the new sales cycle - online thoughtleadership - online sales - measuring media effectiveness

### **Unit V: Modern Media Applications and Trends**

Applications of modern media: Health, religion, politics, entertainment, journalism, transportation, ecological consciousness, campuses - Digital Marketing: e-CRM, branding - RFID - contextual ads. – Searchengines - reputation and privacy issues

### **Course Texts**

1. Scott David Moorman, The New Rules of Marketing and PR, 2nd ed. John Wiley & Sons, 2011
2. Fine Robert, The Big Book of Social Media: Case Studies, Stories, Perspectives, YorkshirePublishing, OK, USA, 2010

### **Course References**

1. Shameem A (Ed.), New Media Marketing: Re-inventing new avenues , Excel Books, New Delhi,2009
2. Kotler Philip Gary Armstrong, Prafulla Y. Agnihotri, and EhsanUIHaque, Principles of Marketing,Person Education, ed. 13, 2010



3. Zeithamp Valarie A., Mary Joe Bitner, Services Marketing - Integrating Customer Focus Across the Firm, Ed., 5, Tata McGraw Hill, New Delhi. 2010

### **16UMM4MC01 3D CHARACTER MODELLING**

Semester: IV Credits : 3

Category: MC Hours/Week : 6

#### **Objectives:**

- To provide an overview of 3D Character & Props Modeling
- To discuss various techniques used by the industrial experts when learning character modeling.
- To create the structure of the human form in 3D modeling.
- Understanding the process of creating 3D models for animation
- Handling the Texturing, Rigging, Lighting and Rendering for the 3D models thus created

#### **Content:**

**Unit-1: Conversion of 2D drawing to 3D Model:** Introduction to Creating Characters and Props, Understanding their relation and usage, Collect different characters and its relative props - Human Figures, cartoon characters, Animals, Birds, Props etc. Understanding the connection between characters and props, Understanding how to convert 2D drawings to 3D manually, Understanding volume handling and light & shade

**Unit-2: 3D modeling of characters and props & Texturing:** Hyper realistic Character Modeling and digital sculpting: Modeling the hyper realistic Human Face-Modeling the hyper realistic Human body -Quadruped Modeling- Adding hyper realistic detail with Digital sculpting tool and Modeling of related Props. Character Texture painting with Photoshop and 3D painting tool- Image based Texturing (Image Projection)



and Painting UV seams -Creating Bump, Normal, Displacement and Specular map-Texturing techniques for Characters and Props. Study the principles of Color theory and ways in which it can be explored to meet the needs of the production.

**Unit-3: Rigging Basics:** Bones and Joints Skin, Binding Kinematics (IK & FK), Requirements for a clean Model, Clean UVs. Binding - Smooth Binding. Concept of a single cluster.Max Influence & Drop-off rate. Rigid Binding - Concept of a Multiple cluster, Practice of Rigid and Smooth Binding, Editing the Smooth Skin, Adding influence objects, Painting of skin weights, Editing Skin weights, Mirror Skin Weights. Copy skin weights Resetting, Skin weights. Pruning small weights, Normalize Weights, Export / import skin weight maps, Editing Rigid Skin, Creating and Editing Flexors, Lattice, Sculpt, joint Cluster, Painting Cluster weights, Rigid Binding Practice. Rigging the controls - IK and FK, Joints and hierarchies Concept of Skeleton, Connect Joint, Remove, joint, Insert joint, Re-root joint Mirror, Joint, Set preferred angle, Assume preferred angle.

**Unit-4: Lighting & Compositing:** Types of Lighting, Physical properties of light, Natural and artificial light study, Color, Aesthetics and mood, Roll of lighting in visual composition. Character lighting, Shadows, Lighting effects.Intro to shaders. Understanding Concept of camera, Orthographic projection, Working with Maya camera and attributes. Light Theory, Physical properties of light, Classification of lights in MAYA, Common Light Attributes.Concepts of lighting - 3-Point Lighting, Key – Fill- BG - Rim etc. The Visual Functions of Shadows, Shadow types - Depth map Shadows, Ray traced shadows.

**Unit-5: Rendering for characters and props:** Essentials of rendering - Types of rendering engines - Using the Render Settings Window- Image & Video formats Resolution, Intro to shadersRendering optimization - Introduction to mental ray, Render passes

**Assignments:**



Use Maya to create different characters - Human Figures, cartoon characters, Animals, Birds, Props etc. Apply Texturing, Rigging, Lighting and Render the models

**Methodology:**

Extensive Theory & Practical sessions, Software Practice, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

**Reference Books & Online References:**

1. Maraffi, Chris (2004). Maya Character Creation: Modeling and Animation Controls. New Riders.
2. Oliverio, Gary (2006). Maya 8 Character Modeling. Jones & Bartlett Publishers
3. Allen, Eric & Murdock, Kelly L. (2008). Body Language: Advanced 3D Character Rigging. Sybex Publication.
4. Digital Lighting & Rendering, Second Edition by Jeremy Birn
5. Lighting and Rendering in Maya: Lights and Shadows by Jeremy Birn

**16UMM4ES01 STORYBOARD AND CHARACTER  
DESIGNING**

Semester: IV Credits : 4

Category: ES Hours/Week : 6

**Objectives:**

- How to create a story-board and understanding the standard practices



- Character designing techniques and acquiring professional skills in designing characters

**Content:**

**Unit-1:** Understanding the Concept and Story Development: Introduction to Principles of Drawing, Scripting & Story boarding for animation: Creation and Development.

**Unit-2:** Introduction of Story Board and Types of Story Board: Scripting & Story boarding for animation: Creation and Development.

**Unit-3:** Applying Angles and Shots: Understanding different camera angles and shots and applying in your own group project. Camera Panning techniques, Zoom-in & Zoom-out, Cut-shot, Dissolve transform, trick shot, hook-up shot etc. Using standard symbols in story-board to depict the camera angles, zooming options etc. Creating your own animatics.

**Unit-4:** Principles of Characters and Props Design: Different types of characters, different body shapes for cartoon characters, Head shapes and characteristics, Hands – on Characters and Props Design, Create your own cartoon character and its relative props. Understanding the Character Bible: Original character creation and its turn-around, lip-synch, size relation chart and their respective props etc.

**Unit-5:** Understanding the 2D Animation Workflow: Understanding the entire pre-production process involved in 2D Animation.

**Assignments:**

Story creation, story-board creation, animatics creation, character turn-around and other charts.

**Methodology:**

Extensive Theory & Practical sessions, Drawing & Coloring Sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits



### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

### **16UMM4ES02 ADVANCED 2D ANIMATION**

Semester: IV

Credits : 4

Category: ES

Hours/Week : 6

### **Objectives:**

1. To make students experiment the advanced techniques of 2D animation.
2. To teach them to apply fundamental principles of animation in both traditional cel animation and in Flash space.
3. Experiment different types of animation like cut-out animation, silhouette animation etc.
4. Understand the entire workflow of 2D animation process and apply them in own group project

### **Content:**

**Unit-1:** Advanced 2D Animation: Advanced cel animation practices, How to use story-board effectively, How to plan the action before starting animation, How to work in a team for animation, Applying the principles of animation, Expertising in Posing and Character emotion for different actions, Animating for own story.

**Unit-2:** Applying different types of 2D Animation: Create original ideas to apply different types of animation like Cut-out Animation, Silhouette Animation etc.

**Unit-3:** Advanced Flash Animation: Understanding and applying complex movie clip properties, layers, library etc. Understanding advanced timing in animation, Coloring in flash, BG and Layout creation in flash. Creating your own group project in flash



**Unit-4:** Understanding the Production workflow for 2D animation: Understanding the entire workflow involved in the Production process. Apply the process for the group project

**Unit-5:** Different domains to use Flash Animation: Understanding the different industries and domains where 2D animations can be used like – Entertainment, Education, Technical, e-learning etc.

**Assignments:**

Characters and Props creation in 2D and Flash, Background with over-layers creation, Staging, Character Animation in Flash, Animation with EFX, 2D Compositing in Flash

**Methodology:**

Extensive Theory & Practical sessions, Drawing & Coloring Sessions, Computer Lab sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

**16UMA4AL01 -WRITING FOR ANIMATION**

SEMESTER: 2

CREDITS: 6

CATEGORY: AL

NO.OF HOURS/WEEK: 6

**Objective:**

To make students understand the elements of writing for animation

**Content:**

**Unit I:** Elements of writing, elements of style in writing and type of compositions. Types of writing-Frictional and Non-frictional, rules of grammar and usage.



**Unit 2:** Narrative structure: Elements of script writing Beginning-Middle-End, Syd Field's Paradigm, conflict, development, climax and denouement – story, storyline, dialogues interaction through dialogue plot, and treatment – principles of suspense and surprise. Three point and Two point structures, Dialogue and Description Imagery

**Unit 3:** Techniques to produce fast scrip, Advantage of script writing with softwares. Script writing for 2D Films and Animations and writing for new media – internet and mobile media.

**Unit 4:** Importance of story board, Definition, Advantage, Elements of storyboard, Storyboarding movements, storyboarding with sketching, Create a storyboard.

**Unit 5:** Different types of story boards, Traditional Storyboards, Animatics, Digimatics, Creating a Storyboard for Animation Advertisement, Animation Short Film.

***Methodology:***

Extensive Theory session with ample Visual input to enable students to understand and apply the Writing for Media.

***Evaluation:***

Internal 50%: CA I & II = 35 marks and Assignments 15 marks.

External 50%: Semester examination written 100 marks

**References:**

- 1) How to Write for Animations by Jeffrey Scott
- 2) Milnor Hyde, Grant, *Newspaper Editing – A manual for Editors, Copyreaders and students of Newspaper Desk Work*, Gebert Press, 2008.
- 2) Animation Writing and Development by Jean Wright
- 3) The Complete Book of Scriptwriting by -J. Michael Straszynski
- 6) The Animator Survival Kit , Richards Williams
- 7) Cartoon Animation , Preston Blair





## 16UMM5MC01 3D ANIMATION WITH VOICE-OVER

Semester: IV Credits : 6

Category: MC Hours/Week : 3

### Objectives:

- To introduce fundamental 3D theories and principles of computer animation, basic techniques of 3D Animation.
- To learn the basics of 3D Animation using Maya with Voice-Over
- Apply animation for Characters, Animals, Birds, Aliens, Technical Animations etc.
- How to use Voice-over software – MimicContent

**Unit-1:** Basics of 3D Animation: Introduction to Maya Basic Animation tools. 3D animation and film-making to create sequences and scenes/shots. Follow the storyboard for composition i.e. positioning of the character model with respect to the background and camera to create the desired animation. Communicate requirements to camera and lighting for motion capture, where required. Dope Sheet, Moving Keys in Dope Sheet, Time Line, Setting up output file size and resolution, Previewing Animation using Playblast.

**Unit-2:** 3D Animation with Voice-Over: Animate expressions and lip movements to match dialogues and sound. The typical processes involved 3D Animation Production i.e. Staging, Blocking, 1st. level Animation, lip-Sync and Facials, Final Animation

**Unit-3:** Principles of Movement & Timing: Understand the Principles of movement and timing. Principles of human/ animal/ character anatomy and how they can be applied to animation. How to observe and study human/ animal/ character behavior and expressions to help visualise concepts. How to



enact and emote; and thereby animate characters in accordance to the demands of the script and animatic.

**Unit 4:** Executing Animation principles in 3D space: Executing Basic Principles in 3D space - Different types (Materials ) of Ball Bouncing- Ball bouncing on different types of surface. Timing and Spacing; Animating a ball/ made of different material/s, surface/s and texture/s – Metal, Rubber, Plastic, Wood.Arcs: Animating different ball/ made of different material/s, surface/s and texture/s – Wood, Ping Pong, at the same time. Exaggeration: Animating collision between two or more different bouncing ball in a environment in side view

**Unit-5:** EFX Animation: Properties of the surfaces that are being used in the animation. Specialised Animation (cloth and hair simulation), Secondary Animation (accessories), Lighting & Rendering, Sfx and Compositing. Pendulum Animation in 3d: Classical Pendulum and Hinged Pendulum. Follow Through, overlap; Animate a Ball with a tail (like a Squirrel). Wave Motion.

### **Assignments:**

Create your own 3D Character animation with lip-synch and Voice over

### **Methodology:**

Extensive Theory & Practical sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

Reference Books & Online References:

- 3D Animation Essentials by Andy Beane
- 3D Art Essentials by Ami Chopine
- Understanding 3D Animation Using Maya by John Edgar Park



- Basics Animation: Digital Animation by Andrew Chong

## 16UMM5MC02 ADVANCED 3D DYNAMICS

Semester: V Credits : 6

Category: MC Hours/Week : 6

### Objectives:

1. To provide an overview of Advanced 3D Dynamics – Cloth Handling, Hair, Fur Simulation, Fire, Smoke creation
2. Advanced Lighting Techniques
3. Advanced Compositing in both 2D and 3D
4. Advanced RenderingContent

**Unit-1:** Advanced 3D Dynamics: The interaction between various characters in a given scene and bring out that dynamic in the animation. Movement of Accessories, objects, props, sets and locations. Movement of bipeds and quadrupeds - Hair/fur simulation - Cloth simulation.

**Unit-2: Paint Effects in Maya: Creating Environment and Backgrounds,** Under Water Scene, Sky, Desert, Shrubbery. Particles - Particle Terminology, Particle Tool, Using emitters. Particle Attributes – Lifespan, Render Attributes. Per particle attributes. Forces and fields. Applying Fields. Types of Fields. Common Field Attributes. Particle Goals. Emit from object. Curve Emission. Surface Emissions. Particle Expressions. Rigid Body Basics Active/passive, rigid Bodies Rigid Body Attributes, Rigid Body Simulation Rigid, Body Constraints, Dynamic simulations Soft Body Basics.

**Unit-3:** Advanced Lighting: Handling different types of Lighting for the given theme

**Unit-4:** Advanced Compositing: Compositing in both 2D and 3D. Handling compositing for the theme

**Unit-5:** Advanced Rendering: V-Ray software usage



### **Assignments:**

To apply the learned 3D dynamics, lighting, Compositing and Rendering skills in the created 3D models and animation

### **Methodology:**

Extensive Theory & Practical sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Theory – 100 Marks

Reference Books & Online References

## **16UMM5MC03 PRODUCTION MANAGEMENT**

Semester: V Credits : 6

Category: MC Hours/Week : 6

### **Objectives:**

To provide an overview about understanding the project brief, product requirements and methodology/technique(s) to be used for productionContent

**Unit-1:**Understanding Production Concepts & their Applicability: Understanding Production concepts & their applicability to each project, The various techniques available for animating objects, How to observe, act and emote, The technical aspects of the job undertaken by other members of the production team (before and after the work of an animator)

**Unit-2:**UnderstandingAnimation Requirements: Understanding the following from the Director and Art Director:

1. Objective
2. Concept/style of animation
3. Script



4. Storyboard and Animatic
5. Do's and don'ts for Animation
6. Target audience
7. Project Pipeline/ asset management/ scheduling and activities
8. Project timelines and constraints
9. Production brief/ key milestones for delivery
10. Creative brief/Desired look of the end-product – using similar projects for reference
11. Quality standards to be maintained • Technical details like aspect ratio, output format
12. List of deliverables and their respective output format

**Unit-3:** Understanding the type of end-product that needs to be produced:

1. Film
2. Television series
3. Mobile/Tablet/ Handheld episodes
4. Advertisement
5. Education content/ edutainment
6. Work-products for the Internet
7. Promotional material/Corporate presentations
8. Game art (Player Animation, Environment Animation, Background etc.)
9. Simulation 3D
10. Augmented reality
11. Industry specific content such as Scientific Animation, Legal, Architecture, Medical, Research wings of Armed forces etc.
12. Specifics for delivery with respect to the web/mobile platform

**Unit-3:** Post-Production Techniques: Applicability of various techniques to post production of each project. To understand the objective/purpose that the end-product intends to achieve, The animation process and technical pipeline to be followed for animation KA6. The format of the end-product and the medium on which it would be exhibited



#### **Unit-4: Production Requirements:**

1. Understand, clarify and agree on the project brief from the Director, Art Director and Supervisors.
2. Understand various parameters of the end-product that would influence production requirements (e.g. duration, style, number of characters, storyline, effects required, format, music etc.)
3. Understand the treatment of the output that needs to be produced and the volume of the final output
4. Understand the shot sequence (high-level) and continuity/consistency required

**Unit-5: Copyrights:** Intellectual property rights to ensure that the end-product, elements, artwork etc. created is unique and does not infringe upon the rights of other products

#### **Assignments:**

Assess and critique past and current animation design trends, Critically analyze your creative work and the work of others, Define and apply design principles and theories to animation production, Demonstrate skills in the use of industry standard tools for animation, Create traditional and computer generated animation based on current industry trends and practices

#### **Methodology:**

Extensive Theory & Practical sessions, Group Discussions, Presentations, Creative thinking sessions, Critical thinking sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

#### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Theory – 100 Marks

#### **Reference Books & Online References:**

1. The Art of story board by John Hart



2. 'How to Write for Animation' by Jeffrey Scott's book
3. The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash [Paperback], Maureen Furniss
- Drawn to Life: 20 Golden Years of Disney Master Classes: Volume 1: The Walt Stanchfield Lectures [Paperback], Walt Stanchfield
- Facial Expressions: A Visual Reference for Artists, Mark Simon, Publisher: WatsonGuptill, ISBN-10: 0823016714, ISBN-13: 978-0823016716

### **16UMM5MC04 DOCUMENTATION AND PRESENTATION SKILLS**

Semester: V	Credits : 4
Category: ES	Hours/Week : 6

#### **Objectives:**

1. To improve the documentation and presentation skills of students to better their performance in work and business settings.
2. To give an understanding of the usage and basics of Computer and imparting skills to documentation software.

#### **Content**

**Unit-1:** Documentation Skills: The user/individual on the job needs to know and understand how to:

1. Document the project brief that can serve as a reference document for circulation to the production team
2. Document decisions on the technique to be used and reasons thereof
3. Document other areas (e.g. requirements of the target audience, market, end-product, reference links, videos etc.) that may be relevant for the production team



4. Document notes on the project brief, techniques and other useful information for personal use
5. Document links, animation videos, artwork etc. that can be used as references during the production process
6. Document character profiles and background descriptions, to help present to the team, and guide the production process

**Unit-2:** Reading Skills: The user/individual on the job needs to know and understand how to:

Read and understand the script and determine animation requirements (including specifics of the characters, country, culture etc.)

1. Read about emerging techniques in animation and update skills accordingly
2. Read and understand the comments given by the supervisor, director or customer
3. Research the various types of end-products that have been produced and are available in the public domain

**Unit-3:** Listening & Speaking Skills: The user/individual on the job needs to know and understand how to:

1. Understand, clarify and agree on the project brief and parameters of the end product with the team
2. Discuss and agree on the technique to be used with the Director and Art Director
3. Communicate the project brief effectively to team members, other animators and members from various departments involved in the animation process
4. Clarify needs and communicate with clients (knowledge of English is preferred)
5. Suggest creative ideas to the team
6. Communicate clearly and collaborate effectively with colleagues from various departments

**Unit-4:** Introduction to MS Office Tools: Introduction to MS Office Tools - Microsoft Word, Microsoft Excel, Microsoft PowerPoint, MS Paint, MS Visio. Basics of Digital Tools - New





media technology including what is good for the web, mobile, tablets. How to create Blogs, Online Website, Social Media pages etc.

**Unit-5:** Core Presentation Skills: Preparation of presentation – Basics–Target audience, Structure, Principles and Presentation Techniques, Business presentation specifications, Report Writing, Developing Effective Presentation Skills. Oral Presentation: Principles of oral presentation, factors affecting presentation, sales presentation, training presentation, speeches to motivate. Slide Presentation: Prepare an Outline, Draft your message, Use of Visuals, Creative Content. Writing skills– Writing CV's ,Report writing, copy writing. Essay writing - Essay writing on any current issues -Writing Research papers – Dissertation.

**Assignments:**

Presentation / Seminar on a given topic

**Methodology:**

Extensive Theory sessions, Group Discussions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Theory – 100 Marks

**Reference Books & Online References:**

1. Effective Presentation Skills – Robert Dilts, Meta Publication
2. Business Communication Today - Bovee and Thill: Tata McGraw Hill.
3. Peter, Francis. Soft Skills and Professional Communication. New Delhi: Tata McGraw Hill.



## 16UMM5ES01 MODELING & TEXTURING

Semester: V Credits : 4

Category: ES Hours/Week : 6

### Objectives:

- Advanced Modeling and Texturing Techniques
- Character Modeling in Maya, Modeling with NURBS
- Create your own character in Maya

### Content:

**Unit-1:** Character Modeling: Polygonal Modeling – Using primitives Converting Poly To Quads – Creating Linear Templates – Working With Poly Editing Tools: Making Simple Hand – Sub div Proxy Modeling – Splitting Polygons – Creating Areas of Details on a Poly Mesh (Surface).

**Unit-2:** Modeling with NURBS: Lofting, Surface, Extruded Surface, Planar Surface, Beveled Surface, Boundary Surface – Combining Techniques and Surface History – Modeling with Deformers – Editing NURBS Surfaces – Using NURBS Surfacing to Create Polygons – Converting NURBS to Polygons Patch Modeling – Using Artisan to Sculpt NURBS.

**Unit-3:** Modeling with Deformers and Subdivisions Surfaces: The Lattice – Creating a Base Poly Model, Modeling and Animations, Interiors - More complex UV mapping, Programmatic movement.

**Unit-4:** Advanced Maya Texturing: Maya Hardware, Software, Mental Ray and Vector settings overview. Indirect lighting: Final Gather - Maya Utilities & Shading Networks. Observing & studying surfaces - Lighting & rendering terminology - UV Mapping overview. Shadow types: Depth Map & Ray traced shadows – Creating Texture Maps - Specular and Bump

**Unit-5:** Expressions & Rendering: Using Expression in After Effects, Advantages of Using Expressions Wiggle Script, Controlling the animation of objects using script, Advanced Expression for animation - Rendering: Exporting video Clips,



Exporting Single Frame of the animation, Exporting part of the animation. Batch rendering, Creating Batch Render.

**Assignments:**

Concept Designs in color, Abstract designs representing Principles & Elements of Design, CGI - Software outputs

**Methodology:**

Extensive Theory & Practical sessions, Computer Lab sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

Reference Books & Online References:

**16UMM5ES02 RIGGING & ANIMATION**

Semester: V Credits : 4

Category: ES Hours/Week : 6

**Objectives:**

- Creative Thinking
- Concept Development
- Story Telling

**Content:**

**Unit-1:** Advanced Character Rigging: To learn advanced character rigging techniques in Maya. How to create a modular rig to be inserted into the skeletons for flexibility and speed. How to create and utilize custom tools. To learn how to create IK FK systems to produce more exaggerated results. To learn how to create non-flipping twist rigs to hold volume.

**Unit-2:** Create your Own Character and Apply Rigging: Usage of Rigging in 3D Animation, To get a solid understanding of



rigging characters and use the rigging techniques on your own characters.

**Unit-3:**Advanced Animation: Character Animation, Animation Types – Key frame Animation – Understanding Animation workflow. Animation Techniques – Non – Linear and Character Animation – Posing, Timing and Refining – Working with Poses. Path Animation - Animate an object along a curve or surface - Edit path or other animation parameters during playback - Set Driven Key - Establish Relationships where one action automatically drives another. Character Animation – Skeletons – Clusters and Lattices Forward and Inverse Kinematics – Using the IKRP Solver, IKSC Solver, IK Spine handle Solver, IK Spring Solver, Human IK Solver – Switching between FK and IK

**Unit-4:** Timing for 3D Animation: Dope sheet - Rapid and intuitive global editing of key frame timing - Channel Box - Quickly edit an Object's attributes, one or more fields at a time - Graph Editor - Precise Controlling on animated parameter changes over time -Motion Blur - Generalized Constraints - Comprehensive assortment of constraints. The Animation Process: Posing, Timing and Refining

**Unit-5:** Animate your own model: Understanding 3D Animation workflow, Animate your own character

### **Assignments:**

Concept Designs in color, Abstract designs representing Principles & Elements of Design, CGI - Software outputs

### **Methodology:**

Extensive Theory & Practical sessions, Drawing & Coloring Sessions, Computer Lab sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks



## 16UMM6MC01 LIGHTING & COMPOSITING

Semester: VI

Credits : 4

Category: MC

Hours/Week : 6

### Objectives:

- To know about lighting in 3D animation
- Concept Development
- Story Telling

### Content:

**Unit-1:** Advanced Lighting: Usage of lighting in 3D Animation. Types of Lighting in 3D, Shadow types: Depth Map & Ray traced shadows - Global Illumination using Spot lights - Ray tracing: reflections & refractions - Basic three point lighting setups - Physical Sun & Sky network. Color Temperature Chart - Overview of Final Gather - Scattering - Mental Ray's nodes - A first look at Global Illumination - Introduction to Caustics - Using Global Illumination - Setting up caustics. Lighting and Rendering options

**Unit-2:** Compositing: Introduction to motion graphics - Video montage Video Titling Logo Animation. Visual Effects (VFX) and other applications. Different types of Compositing, Introduction to Adobe After Effects. Digital Compositing: Introduction to Compositing Digital Images, The art of Storyboarding

**Unit-3:** VFX – Chroma & Paint: To understand chroma keying - Why Chroma is used? Why Blue v/s Green Chroma?. Advantages of Fully lit Chroma Screen - Things to remember when shooting Chroma Shot - Importing Chroma Footage to After Effects - Keying Tools in After Effects - Correcting Keying using Masks - Advanced Chroma Keying of Semi-Transparent Clothes- Keying of loose hair - To understand chroma keying, Blending chromed Footage with the background – To learn to use Paint, Toolbar, Using Brush tool, Animating Brush Paint. To learn matte painting and composite it with layers, Matte Painting in layers Animating matte



paintings for the scene, Animating paint, Advanced Paint Animation Adding Filters Painting for 3D space.

**Unit-4:** VFX - Rotoscopy: To learn how to remove wires, ropes and rods, Concept of using wires for action stunts, the steps involving in shooting an action scene with wires, Wire Removal uses Masking technique, Using Clone Stamp Tool, Clone Stamp tool for Wire Removal – To understand Rotoscopy, basic Rotoscopy techniques.

**Unit-5:** Color, Camera & Tracking: Stabilization/Color Correction. Colour manipulation tools, Filters, Colour Manipulation using Blending Mode, Layer Blending. Advanced Colour Correction Creating Mood for the scene Tinting Footages, Exposure Adjustments, Brightness and Contrast. Learning to stabilize camera shake and jitter, Analyzing Footage for shake, Using stabilize option - Camera Tracking: Tracking Concept, Using footage elements in tracking, 2D Tracking, Using the Data of Tracking. 3D Tracking, Constraints of 3D Tracking, Using the Data of Tracking, Advanced Tracking Techniques.

### **Assignments:**

Concept Designs in color, Abstract designs representing Principles & Elements of Design, CGI - Software outputs

### **Methodology:**

Extensive Theory & Practical sessions, Drawing & Coloring Sessions, Computer Lab sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

### **Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Written – 100 Marks

Reference Books & Online References:

1. Post Production [Compositing Techniques] by Arun.L  
,i-Nurture Education Solutions Pvt Ltd.



2. Digital Lighting & Rendering, Second Edition by Jeremy Birn
3. Lighting and Rendering in Maya: Lights and Shadows by Jeremy Birn
4. Compositing Digital Images, T. Porter and T. Duff, Proceedings of SIGGRAPH '84, 18 (1984)
5. The Art and Science of Digital Compositing, Ron Brinkmann
6. The Art of story board by John Hart
7. 'How to Write for Animation' by Jeffrey Scott's book
8. The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash [Paperback], Maureen Furniss
9. Drawn to Life: 20 Golden Years of Disney Master Classes: Volume 1: The Walt Stanchfield Lectures [Paperback], Walt Stanchfield
10. Facial Expressions: A Visual Reference for Artists, Mark Simon, Publisher: Watson Guptill, ISBN-10: 0823016714, ISBN-13: 978-0823016716

## **16UMM5SK01 VFX AND EDITING TECHNIQUES**

Semester: V Credits : 4

Category: SK Hours/Week : 6

### **Objectives:**

- To make students understand the use of Visual effects in media and animation industry
- To make them fully understand the latest VFX techniques and software
- Handling VFX for 2D, 3D and Live shoot
- Learning Video Editing Techniques
- To prepare the learners to design and execute compositing in Visual Effects using digital electronic media and develop the students in a core set of technical and creative skills related to digital filmmaking.



## Content

**Unit-1:** Rotoscope: Normal Rotoscope & Stereoscopic Rotoscope

**Unit-2:** Paint: Normal Paint & Stereoscopic Paint. Matte Painting. Blue Matte & Green Matte Removing: Live Shoot, Wire removal - Removal of Blue Matte & Green Matte,

**Unit-3:** Compositing: Normal Compositing & Stereoscopic Compositing, Compositing, crowd replication, motion capture.

**Unit-4:** Camera Tracking: Match Movie – with Camera movements. Visualization techniques, visual scripting and modelling. Mise-en-scene, auteur vs director, space and time, three part narrative structure, material properties of the medium, persistence of vision, 180 degree principle, framing, camera movements.

**Unit-5:** Editing: AVID or FCP - Voice acting, voice effects and digital effects, rendering and grain effects. Continuity editing and montage editing, rough cut, final cut and director's cut sound designing and mixing

### Assignments:

Convert the given video clip to Stereoscopy.

### Methodology:

Intensive Practical sessions coupled with workshops and discussion with expert from the industry, Workshops & Seminars, Guest Lectures, Assignments, Industry Visits

### Evaluation:

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Theory – 100 Marks

### Reference Books & Online References:

1. Beck, Jerry, “Animation Art: From Pencil to Pixel, The World of Cartoon, Anime and CGI” Collins, 2004.





2. Clements, Jonathan and McCarthy, Helen,” The Anime Encyclopedia,” Stone Bridge Press, 2001.
3. Ryder, Antony, “The Artists Complete Guide to Figure Drawing,” Watson-Guptill,1999.
4. Goldfinger, Eliot,”Human Anatomy for Artists :The Elements of Form,”OUP,1991.
5. Rawson, Philip, “Design, “ Prentice Hall,1987.
6. Bryson, Norman, Ann Holly, Michael, Moxey, Keith, “Visual Theory: Painting and Interpretation, “Harper Collins,1991.
7. Cancellaro, Joseph, “Exploring Sound Design for Interactive Media, “Delmar Cengage,2005.
8. McAlister, Michael, “The Language of Visual Effects”,Eagle,1993.
9. The Invisible Art by Mark Cotta Vaz
10. Visual Effects Cinematography [Paperback] ZoranPerisic (Author)
11. Industrial Light & Magic: The Art of Special Effects by Thomas G. Smith
12. The Art and Science of Digital Compositing (The Morgan Kaufmann Series in Computer Graphics) by Ron Brinkmann
13. The Language of Visual Effects by Micheal J. McAlister
14. Special Effects: The History and Technique by Richard Rickitt

## 16UMM6MC01 ART AND AESTHETICS

Semester: VI Credits : 5

Category: MC Hours/Week : 6

### Objectives:

- To acquire knowledge of art and aesthetics to appreciate arts in different form.
- To imbibe a historical understanding of art of India and the West.



## **Content:**

**Unit II** General principles of art and beauty in Indian art: principles of image making; Six limbs of Indian paintings (shadanga) and six Chinese canons; Theories of Rasa, Dhvani, Alankara, Auchitya and Riti. Visual and performing art. Paintings in Chitrasutra. Visible and invisible aspect of art (Drishyam/Adrishyam), Tamil literature: agam, puram, thinai.

**Unit II** Formal and stylistic aspect of Indian sculpture and architecture. Indian paintings: Ajanta, mural tradition, manuscripts, Rajasthani, Malwa, Pahari and Deccani; Indian Iconography; Indian schools of Art: Raja Ravi Varma followers, Neo-Bengal School, Indigenous, Figurative-narrative and Abstract trends in 60s and 70s, Modern Trends.

**Unit III** Western approach to art and aesthetics: Plato, Aristotle and others. Aesthetic categories: beauty, tragic, comic, sublime. Manifestos of modern art movements. Theory of Avante-Garde. Implication of theories of Semiotics. Structuralism, Post-modernism and Feminism on Art thinking and writing.

**Unit IV** Art criticism and aesthetic theories: Development of formalism (Wolfflin, Reigl, Roger Fry, Greenberg), Iconology (Gombrich and Panofsky), Visual Perception (Rudolf Arnheim) and New Art History (Bryson, Hal Foster). Ananda Coomaraswamy and Stella Kramrisch and their relevance in the Indian Art History study.

**Unit V** Development of Art in History: Pre-historic art, Greek, Roman, Early Christian art, Byzantine, Gothic, Renaissance, Mannerist, Baroque, Romanticism, Realism, Impressionism, Post-impressionism, Symbolism, Fauvism, Cubism, Expressionism and abstract trends. Futurism, Dadaism, Surrealism, Abstract expressionism, Op, Pop, Minimal, Neo-figuration and art in Post-modern period – Italian Trans-avant-garde, German Neo-expressionism, Happening, Installation, Feminist, Gay art.

## **Evaluation:**



- Internal 50%: CA I &II Tests 40 marks and Assignments 10 marks
- External 50%: Semester Examination - Written 100 marks

**Key Texts:**

1. Gardner Helen,[2012] Art through the Ages: A Global History, Volume I and II, Wadsworth Publishing.
2. Robert Stecker,[2010]Aesthetics and the Philosophy of Art: An Introduction (Elements of Philosophy) Rowman& Littlefield Publishers.
3. Yuri Borev, [1985] Aesthetics, Progress Publications, Moscow.
4. Rama Coomaraswamy (Editor),[2003] The essential Ananda K Coomaraswamy, World wisdom Publisher.

**Books for Reference:**

1. Arnold Hanser,[1982] Social History of Art, Routledge and Kegan Paul, London,.
2. Ernst Fischer,[1963]The necessity of Art, penguin Books, U.K,.
3. Nihranjan ray [1974]An Approach to Indian art, , Publishing Bureau Punjab University,.
4. Compilation,1990] Aestheticians, publications Division, Government of India.

**16UMM6MC02 ADVANCED 3D MODELING**

Semester: VI Credits : 6

Category: MC Hours/Week : 5

**Objective:**

1. To make students understand the detailed process of 3D modeling and texturing involved in Animation film making and the methodologies involved in creating 3D stylized cartoon characters



2. Architectural walk-through with texturing, Interiors and exterior creation
3. Matte Painting for BGs
4. Camera handling for staging, Lighting & Compositing

## Content

**Unit-1:** Advanced 3D Modeling: How to use modeling software and tools such as Maya, 3D Studio Max, Blender, Mud-Box, Zbrush, Mari etc. Learn how to optimize mesh to reduce file size, Preparation of computer generated 3D models, which would include: Characters, Machines, Sets and Props, Objects, Locations/ Background elements such as Environment, landscapes, interiors etc. Blend shapes. Understand the final display medium and adapt / suggest the model for its polycounts, mesh complexity, movement capability etc.

**Unit-2:** Advanced 3D Character Modeling: Principles of 3D modeling and animation including concepts like polygons, Prepare computer generated models, nurbs and sub surface modeling etc. Human anatomy, skeleton structure, joints, facial muscles etc. Human mannerisms, emotions, behavior, facial expressions etc. Basics of rigging to help build models with the minimum necessary spline, nurbs and polygons. Techniques and workflow of UV mapping

**Unit-3:** Advanced 3D Product Modeling – Machines & Buildings: Principles of engineering. Physics of motion, resistance and volume. Form, scale and proportion of various models. The techniques of sculpting (added advantage). Drawing and illustration techniques. How to create various types of models (organic, non-organic, simple, complex)

**Unit-4:** Advanced Texturing: Create textures for human, animal, character, location, set and props etc. which may include organic and inorganic surfaces such as: Bones, Wrinkles, Bricks, Ground, Rust, Wood, Tiles, Plastic, Paper, Metal, Food, Water, Fire, Skin and Eyes, Walls and ceiling, Imaginary. Understand the final exhibition medium and adapt the textures accordingly. Manage quality of textures during the



animation process and ensure uniformity and consistency in the final output

**Unit-5:** Advanced Rigging: Creating rigs for models which could include creating: Movements of characters, Bends, Stretches, Expressions, Movement of Accessories, objects, props, sets and locations, Movement of bipeds and quadrupeds. Ensure that the final rigs are clean, efficient, have realistic movements (using muscle based rigging) and are animation friendly. Ensure that final rigs are smooth and suitable for exhibition on the applicable medium e.g. feature, television, game, e-Learning etc.

**Assignments:** Create your own scene with character modeling and apply texturing, lighting, Rigging and Rendering

**Methodology:**

Extensive Theory & Practical sessions, Drawing Sessions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Practical – 100 Marks

**Reference Books & Online References:**

1. Maraffi, Chris (2004). Maya Character Creation: Modeling and Animation Controls. New Riders.
2. Oliverio, Gary (2006). Maya 8 Character Modeling. Jones & Bartlett Publishers.
3. Allen, Eric & Murdock, Kelly L. (2008). Body Language: Advanced 3D Character Rigging. Sybex Publication.
4. Introducing Autodesk Maya 2012 - By Dariush Derakhshani
5. Stop Staring: Facial Modeling and Animation Done Right - By Jason Osipa
6. Digital art masters, Volume 3 - By 3DTotal.com



7. Maya character creation: modeling and animation controls By Chris Maraffi

### 16UMM6MC03 GAMING & APPS DESIGN

Semester: VI	Credits : 5
Category: MS	Hours/Week : 3

#### Objectives:

- To creatively and effectively apply design knowledge to gaming environments
- Designing the Game assets, Backgrounds and characters etc. Development of a style and visual quality. Drawing story boards. To understand the role of the designer / artist in game development
- To develop skills in designing Web Pages, Web and Mobile Applications, Understanding User Interface designing.
- Course will be supported with case studies and example to illustrate digital content migration to new media and its challenges and tips and tricks to make it effective and appealing.

#### Content

**Unit-1:** Basics and History of Game Design: Introduction to gaming and concepts. Meaning and definition, Classification of gaming, Game production process, Pre production for Gaming – Concepts and ideas, Game assets design, Production environment steps and planning –Implementation in 2D Flash. Post production – Compositing and editing, sound designing.

**Unit-2:** Websites: Introduction to Game design, Designing Web pages, Creating websites and pages using Dream Weaver - editing cross-platform and cross-browse pages. Flash to HTML 5 Conversion: Flash to HTML 5 Conversion, Understanding basics of HTML 5 to create web pages – Building information



Management, Planning and designing web page - HTML programming, Text, Table, Image and audio

**Unit-3:** Web Apps: Introduction to Web Applications, Understanding Graphical User Interface designing

**Unit-4:** Mobile Apps: Introduction to Mobile Applications, Designing of apps for Android, IOS, Symbian operating systems – Windows Touch apps, Understanding the limitations of the different devices and their specifics

**Unit-5:** Virtual Reality & Augmented Reality: Virtual sets – Application and uses of Virtual reality in day to day life. Augmented Reality – Immersive – Location based – Aided Learning. 3D Bio Printing: Conversion of 3D objects from digital to real life models.

**Assignments:**

Design a Website, an UI for Web app and Mobile App

**Methodology:**

Extensive Theory & Practical sessions, Drawing Sessions, Group Discussions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Theory – 100 Marks

**Reference Books & Online References:**

1. Karl.M.Kapp (2013).The Gamification of Learning and Instruction Fieldbook: Ideas into Practice
2. Brenda Braithwaite, Ian Schreiber (2008). Challenges for Game Designers.
3. Tracy Fullerton,(2014). Game Design Workshop: A Playcentric Approach to Creating Innovative Games.
4. Jesse Schell, (2008). The Art of Game Design: A book of lenses.



5. Duckett Jon, “Beginning Web Programming with HTML, XHTML, and CSS”, Wrox (2004).
6. Adobe Creative Team, “ Adobe Dreamweaver CS6 Classroom in a book”, Adobe (2012).
7. Bill phillips, (2013), " Android Programming: The Big Nerd Ranch Guide"
8. Ray Wenderlich, Mike Berg, Tom Bradely, Mike Daley,(2014) " iOS games by tutorials: Second Edition: Beginning 2D iOS Game Development with Swift"
9. Jens Grubert, Raphael Grasser, (2013), " Augmented Reality for Android Application Development"
10. Tony Parisi,(2015)," Learning Virtual Reality: Developing Immersive Experiences and Applications for Desktop, Web and Mobile
11. I. The Art of Game Design: A book of lenses BY Jesse Schell / CRC Press, 04-Aug-2008
12. II. Game Feel: A Game Designer's Guide to Virtual Sensation (Morgan Kaufmann Game Design Books) by Steve Swink
13. III. On the Way to Fun: An Emotion-Based Approach to Successful Game Design by Roberto Dillon

### **16UMM6TP01 INTERNSHIP**

Semester: VI Credits : 4

Category: MC Hours/Week : 7

#### **Objectives:**

- To impart practical work experience to students to a particular job and business enterprise in order to strengthen their professional skills and interpersonal relationships in a professional environment.
- Objective of providing an internship to the students is to provide them exposure to the outside world on which their confidence builds.





### **Methodology:**

In this Course students will be working on a live project in a Design Studio environment / an Organization similar to that with hands on experience in Research and Product development.

### **Evaluation:**

Internal 50%

External 50%

## **16UMM6MS01 PROFESSIONAL SKILLS FOR ANIMATION**

Semester: VI Credits : 4

Category: MC Hours/Week : 6

### **Objectives:**

- To review the employment resources available to the students
- Provides practical tips on résumé preparation and interview skills.
- A list of local, national, and international studios is provided along with résumé guidelines.

### **Content**

**Unit-1:** Business Opportunities in Animation: Discuss about the business opportunities in Animation, Creative usage of Animation, Existing studios and Industry visits

**Unit-2:** Presentation Skills For Business: Etiquettes for Business presentations – Team presentations and Individual presentation. Preparing successful presentations, thinking about audience, making effective use of visual aid, Delivering presentation, engaging the audience, dealing with questions and interruptions, Mock presentations.



**Unit-3:** Public Speaking Skills: Formal and Informal conversations- INFORMAL: Introducing, Opening and closing Speeches, Inviting, thanking, Apologizing, Expressing anger Resolving conflict, Giving and taking information. FORMAL: Etiquettes for Public Speaking (extempore and lectures), Interviews and Group Discussions, Telephone conversations and Business Meetings.

**Unit-4:** Interview Skills: Interviews – Types of Interviews, preparing for interviews, facing interviews, reviewing performance, participating in mock interviews.

**Unit-5:** Careers in Animation: Career opportunities in animation

**Assignments:**

Presentation / Seminar on a given topic

**Methodology:**

Extensive Theory sessions, Group Discussions, Workshops & Seminars, Guest Lectures, Industry Experts, Assignments, Industry Visits

**Evaluation:**

Internal 50% - CA I & II = 35 Marks & Assignment – 15 Marks

External 50% - Semester Examination – Theory – 100 Marks