



VELS

INSTITUTE OF SCIENCE, TECHNOLOGY
& ADVANCED STUDIES (VISTAS)



(DEEMED TO BE UNIVERSITY Estd. u/s 3 OF THE UGC ACT, 1956)

NAAC ACCREDITED

PALLAVARAM - CHENNAI - INDIA

M.Sc. Animation

Curriculum and Syllabus

(Based on Choice Based Credit System)

Effective from the Academic year

2018-2019

School of Mass Communication

Department of Animation

Program Educational Objectives (PEO)

- **PEO1.** Graduates will be technically skilled to excel in the competitive media industry and continue research in this area.
- **PEO2.** Graduates will have the skills necessary to grow economically and technically using the knowledge to ensure their own creative and innovative skills in the industry.
- **PEO3.** Graduates will analyse the research design and animation concepts to produce socially responsible media content.
- **PEO4.** Graduates will have effective communication skills, team player, ethical principles and the desire for continuous learning and creative skills to succeed in their professional animation career.
- **PEO5.** Develop concepts and assets utilizing design and animation principles in a variety of areas including education, information, entertainment, etc.

Programme Outcomes (PO)

- **PO1:** To demonstrate effective speaking, effective writing and listening skills for communication in personal, public, and media areas.
- **PO2:** To demonstrate the ability to observe events, gather information, write news reports and news releases, report on events, and edit other people's writings.
- **PO3:** To demonstrate the ability to understand the media critically and recognize how media shapes and is shaped by politics, society, culture, economics and daily lives.
- **PO4:** To demonstrate the ability to recognize the power of persuasion and ethical responsibilities of communicators in communication at all levels.
- **PO5:** To demonstrate an understanding of the roles of communication in fostering interaction and interdependence across gender, race, and culture.
- **PO6:** To demonstrate the ability to apply communication theories to analyze contemporary problems.
- **PO7:** To demonstrate an understanding of the history, development, and practice of the print media, electronic media, and the new media

Program Specific Outcomes (PSO)

- **PSO1:** Obtain a significant knowledge on fundamental and advanced aspects of interactive websites, mobile platforms, and other methods including motion graphics (animation), video and informational graphics.
- **PSO2:** Gain in-depth knowledge on designing and developing websites.
- **PSO3:** Acquire knowledge on lighting techniques in 3D Animation.
- **PSO3:** Gain proficiency in techniques of 2D and 3D softwares.
- **PSO4:** Grasp the fundamental concepts of video editing with composition.
- **PSO5:** Gain insight into the various aspects of script writing, story board, art direction. and editing.
- **PSO6:** Enter as 2D artist, 3D Modeler, VFX Artist, Storyboard Designer, Graphic Designer, Web Designer and Game Designer.

**VELS INSTITUTE OF SCIENCE, TECHNOLOGY AND ADVANCED STUDIES
(VISTAS)**

CHENNAI - 600 117

REGULATIONS 2018

CHOICE BASED CREDIT SYSTEM

Common to M.Sc. Full-Time Programmes

DEGREE OF ANIMATION

1. DURATION OF THE PROGRAMME

1.1. Two years (four semesters)

1.2. Each academic year shall be divided into two semesters. The odd semesters shall consist of the period from July to November of each year and the even semesters from January to May of each year.

1.3 There shall be not less than 90 working days for each semester.

2. ELIGIBILITY FOR ADMISSION

2.1. The details of Eligibility for Admission

Candidates who have qualified for the Bachelor's Degree in the subject concerned or a degree accepted as equivalent by VELS University.

3. CREDIT REQUIREMENTS AND ELIGIBILITY FOR AWARD OF DEGREE

3.1. A Candidate shall be eligible for the award of the Degree only if he/she has undergone the prescribed course of study in a College affiliated to the University for a period of not less than two academic years and passed the examinations of all the four Semesters prescribed earning a minimum of 90 credits as per the distribution given in for Part I, II & III, and also fulfilled such other conditions as have been prescribed thereof.

4. COURSE OF STUDY, CREDITS AND SCHEME OF EXAMINATION

4.1. The Course Components and Credit Distribution shall consist Part I, II & III:

(Minimum number of Credits to be obtained)

Credit Assignment Each course is assigned certain number of credits based on the following:
Contact period per week CREDITS

1 Lecture Period - 1 Credit

1 Tutorial Period - 1 Credit

2 Practical Periods - 1 Credit

(Laboratory / Seminar / Project Work / etc.)

5.REQUIREMENTS FOR PROCEEDING TO SUBSEQUENT SEMESTER

5.1. Eligibility: Students shall be eligible to go to subsequent semester only if they earn sufficient attendance as prescribed therefore by the Board of Management from time to time.

5.2. Attendance: All Students must earn 75% and above of attendance for appearing for the University Examination. (Theory/Practical)

5.3. Condonation of shortage of attendance: If a Student fails to earn the minimum attendance (Percentage stipulated), the HODs shall condone the shortage of attendance up to a maximum limit of 10% (i.e. between 65% and above and less than 75%) after collecting the prescribed fee towards the condonation of shortage of attendance. Such fees collected and should be remitted to the University.

5.4.Non-eligibility for condonation of shortage of attendance: Students who have secured less than 65 % but more than 50 %of attendance are NOT ELIGIBLE for condonation of shortage of attendance and such Students will not be permitted to appear for the regular examination, but will be allowed to proceed to the next year/next semester of the program

5.5.Detained students for want of attendance: Students who have earned less than 50% of attendance shall be permitted to proceed to the next semester and to complete the Program of study. Such Students shall have to repeat the semester, which they have missed by rejoining after completion of final semester of the course, by paying the fee for the break of study as prescribed by the University from time to time.

5.6. Condonation of shortage of attendance for married women students:In respect of married women students undergoing UG programs, the minimum attendance for condonation (Theory/Practical) shall be relaxed and prescribed as 55% instead of 65% if they conceive during their academic career. Medical certificate from the Doctor together with the attendance details shall be forwarded to the university to consider the condonation of attendance mentioning the category.

5.7. Zero Percent (0%) Attendance: The Students, who have earned 0% of attendance, have to repeat the program (by rejoining) without proceeding to succeeding semester and they have to obtain prior permission from the University immediately to rejoin the program.

5.8. Transfer of Students and Credits: The strength of the credits system is that it permits inter Institutional transfer of students. By providing mobility, it enables individual students to develop their capabilities fully by permitting them to move from one Institution to another in accordance with their aptitude and abilities.

5.8.1. Transfer of Students is permitted from one Institution to another Institution for the same program with same nomenclature. Provided, there is a vacancy in the respective program of Study in the Institution where the transfer is requested. Provided the Student should have passed all the courses in the Institution from where the transfer is requested.

5.8.2. The marks obtained in the courses will be converted and grades will be assigned as per the University norms.

5.8.3. The transfer students are not eligible for classification.

5.8.4. The transfer students are not eligible for Ranking, Prizes and Medals.

5.8.5. Students who want to go to foreign Universities up to two semesters or Project Work with the prior approval of the Departmental/College Committee are allowed to get transfer of credits and marks which will be converted into Grades as per the University norms and are eligible to get CGPA and Classification; they are not eligible for Ranking, Prizes and Medals.

6. EXAMINATION AND EVALUATION

6.1. Register for all subjects: Students shall be permitted to proceed from the First Semester up to Final Semester irrespective of their failure in any of the Semester Examination. For this purpose, Students shall register for all the arrear subjects of earlier semesters along with the current (subsequent) Semester Subjects.

6.2. Marks for Internal and End Semester Examinations for PART I, II, III

6.2.1 There shall be no passing minimum for Internal.

6.2.2 For external examination, passing minimum shall be 50% [Fifty Percentage] of the maximum marks prescribed for the paper for each Paper/Practical/Project and Viva-Voce.

6.2.3 In the aggregate [External/Internal] the passing minimum shall be of 50%.

6.2.4. He / She shall be declared to have passed the whole examination, if he/she passes in all the papers and practical wherever prescribed as per the scheme of the examinations by earning 90 CREDITS in Part I, II, III.

7. MAXIMUM PERIOD FOR COMPLETION OF THE PROGRAMS TO QUALIFY FOR A DEGREE

7.1. A Student who for whatever reasons is not able to complete the programs within the normal period (N) or the Minimum duration prescribed for the programme, may be allowed two years period beyond the normal period to clear the backlog to be qualified for the degree. (Time Span = N + 2 years for the completion of programme)

8. REVISION OF REGULATIONS, CURRICULUM AND SYLLABI

The University may from time to time revise, amend or change the Regulations, Curriculum, Syllabus and Scheme of examinations through the Academic Council with the approval of the Board of Management.

School of Mass Communication

Department Of Animation

M.SC. ANIMATION

CURRICULUM

Total number of credits: 90

Core	Course Code	Course	Hours/Week			Maximum Marks			Total
			Lecture	Tutorial	Practical	Credits	CA	SEE	
<u>Semester: I</u>									
Core	18CMAN11	Animation Concepts	4	0	0	4	40	60	100
Core	18CMAN12	Media Studies	4	0	0	4	40	60	100
Core	18PMAN11	Drawing & Digital Art	0	0	4	2	40	60	100
Core	18PMAN12	2D Digital Animation	0	0	4	2	40	60	100
Core	18PMAN13	Advanced Graphic Design	0	0	5	3	40	60	100
DSE		Discipline Specific Elective - I	0	0	3	2	40	60	100
DSE		Discipline Specific Elective - II	0	0	3	2	40	60	100
DSE		Discipline Specific Elective -III	0	0	3	2	40	60	100
			8	0	22	21			
<u>Semester: II</u>									
Core	18CMAN21	Animation Principle & Story Development	5	0	0	5	40	60	100
Core	18PMAN21	Modeling & Texturing	0	2	4	4	40	60	100
Core	18PMAN22	2D Character Design & Animation	0	0	4	2	40	60	100
Core	18PMAN23	Concept Art	0	0	3	2	40	60	100
Core	18PMAN24	Digital Matte Painting	0	0	3	2	40	60	100
DSE		Discipline Specific Elective - IV	4	0	0	4	40	60	100
DSE		Discipline Specific Elective - V	0	0	3	2	40	60	100
GE		Generic Elective – I	2	0	0	2	40	60	100
			11	2	17	23			

CA - Continuous Assessment

SEE - Semester End Examination

Core	Course Code	Course	Hours/Week				Maximum Marks		
			Lecture	Tutorial	Practical	Credits	CA	SEE	Total
<u>Semester: III</u>									
Core	18CMAN31	Animation Process & Visual Form	5	0	0	5	40	60	100
Core	18CMAN32	Animation Production Management	5	0	0	5	40	60	100
Core	18PMAN31	Motion Graphics And Visual Effects	0	2	4	4	40	60	100
Core	18PMAN32	Advanced Lighting & Rendering	0	0	3	2	40	60	100
Core	18PMAN33	Advanced Rigging & Animation	0	0	3	2	40	60	100
CORE	18PMAN34	Media Internship	0	0	0	2	40	60	100
DSE		Discipline Specific Elective -VI	0	0	3	2	40	60	100
DSE		Discipline Specific Elective – VII	0	0	3	2	40	60	100
GE		Generic Elective – II	2	0	0	2	40	60	100
			12	2	16	26			
<u>Semester: IV</u>									
Core	18CMAN41	Media Research	2	2	0	4	40	60	100
Core	18PMAN41	Dynamics & Visual Effects	0	0	6	3	40	60	100
Core	18PMAN42	Applied Photography	0	0	6	3	40	60	100
Core	18RMAN41	PROJECT B: Show Reel – 3D	0	0	12	6	40	60	100
Core	18PMAN41	Media Internship	0	0	0	2	40	60	100
GE		Generic Elective – III	2	0	0	2	40	60	100
			4	2	24	20			

CA - Continuous Assessment

SEE - Semester End Examination

List of Discipline Specific Elective Courses:

S. No.	Code	Course
1.	18MAN101	Animation art Direction DSE-III
2.	18MAN102	Art of Story Boarding DSE-I
3.	18MAN103	2D Film Making DSE-V
4.	18MAN104	Match Moving
5.	18MAN105	Advanced Compositing
6.	18MAN106	Dynamics II DSE-VII
7.	18MAN107	UV Layouts & Texturing DSE-II
8.	18MAN108	Visual Effects DSE-VI
9.	18MAN109	Color Grading DSE-IV
10.	18SPGE11	Communicative English
11.	18SPGE21	Communicative English II

List of Generic Elective Courses:

S.No.	Code	Course
1.	18BCF154	E-Commerce
2.	18BCA156	Internet Basics
3.	18BCA153	Office Automation tools

4.	18BCA155	Advanced Excel
5.	18BHM153	Tourism Management

Syllabus

Core Courses

Course objective: To know how different types of media evolved from the ancient period and to know the facts, history, developments about important media like print, radio, TV and new media. And to understand the importance of the mass media in our society.

Course Outcome

At the end of the course, learners will be able to:

CO1: have a very good knowledge of Media, its traditional, folk and other forms.

CO2: gain knowledge about print media – its history and evolution along with its technology, types and concepts.

CO3: have detailed understanding of invention, development, and inception of Radio in world and India.

CO4: understand the establishment of radio stations and its developments through FM transmission and Satellite

CO5: have a thorough knowledge of Television- its origin, development, Broadcasting corporations, Video on Demand and other latest developments.

CO6: gain knowledge about the growth and development of internet communication and online journalism and its types.

UNIT I TRADITIONAL MEDIA 12

Definitions of Media and Mass Media; Traditional Forms of Media – signs, wood carving, Sound, drawings, sculptures; Folk Media – Songs, Drama, Puppet Shows, Storytelling etc.

UNIT II PRINT MEDIA 12

History of the print media and evolution and development of printing technology in India and World; various types of print media, nature, concepts, scope; Content making for print media, Print planning.

UNIT III RADIO 12

Invention and Development of Radio medium, Radio Broadcasting since its inception in world and India, , Establishment of radio stations, growth and development of the medium, AM and FM transmission, Satellite Radio, Audience and reach, role in the development., Radio Planning.

UNIT IV TELEVISION 12

Television-origin and development, nature, scope, audience, genre, functions of television;

Ownership pattern, debate on autonomy; BBC model of ownership, control and programming, commercial and public service, state and private sectors ' expansion; potential for future development, Prasar Bharati Broadcasting Corporation; Satellite television, DTH, Video on Demand, latest developments.

UNIT V NEW MEDIA

12

New Media – origin and development of Internet and web, Growth and development of Internet communication , Nature and Scope of the new media, content generation, reach, online journalism, web TV, Podcasting, e - Publishing.

Total: 60 Hrs

TEXT BOOKS:

1. R.K. Ravindran, "Media in Development Arena", Indian Pub.& Distributors ,2000.
2. Straubhar, Larose, "Media Now", Thomson Wordsworth, 4th Edition, 2004.
3. Keval J. Kumar, "Mass Communication in India", Jaico Publishing Co.2003.

REFERENCE BOOKS:

1. J.K. Sharma, "Print Media and Electronic Media – Implications for the future", Authors Press, 2003.
2. M.S. Sharma, "HandBook of Journalism", Mohit Publications, 2002.
3. Barun Roy, "Modern Student Journalism", Pointer Publishers, 2004.

UNIT V CHARACTER DESIGN**10**

Head types, cartoon eyes, cartoon noses, cartoon mouths, cartoon ears, hands and feet, body types and proportions, developing a cartoon character out of an object, various action poses of a cartoon character, 2D background design, landscape, cityscape and seascape, colorful background design, layer alignment, creating shots for scene.

Total: 60 Hrs**TEXT BOOKS:**

1. Wendy Tumminello, “ Exploring Storyboarding”, 1st Edition, 16, 2004.
2. John Hart, “The Art of the Storyboard,A Filmmaker’s Introduction”, Focal Press, 2nd edition, September 24, 2007.

REFERENCE BOOKS:

1. Preston J. Blair, “Animation 1: Learn to Animate Cartoons Step by Step”, Walter Foster Publishing, Jan 1, 2003.
2. Wayne Gilbert, “Simplified Drawing for Planning Animation”, Anomie Entertainment Ltd, 4th edition, Aug 1, 2014.

Course objective: In this course, student become familiar with the 2d software authoring environment and Flash terminology, Gain understanding of fundamental 2d animation software paradigms (Stage, Symbols, Library, Timeline), Create simple, tasteful animation effects , Learn to export and deploy Animated content on the Digital display.

Course Outcome

At the end of the course, learners will be able to:

CO1: Create vector shapes and backgrounds that incorporate principles of composition, perspective and colour, with speed, accuracy and dexterity, using a variety of tools.

CO2: Create 2D characters and environments that reflect the integration of graphic clarity, Design Principles, animation principles and concepts.

CO3: Incorporate technology effectively in the development of animation projects.

CO4: Communicate ideas, believable action and emotion effectively by employing principles of animation and development in all aspects with layer concepts

CO5: Refine personal narrative voice that holistically integrates with the elements of visuals and perform in order to deliver the quality outputs in animation.

UNIT I CREATING VECTOR SHAPES 10

Introducing 2d animation software interface of using tools, Stage, Symbols, Scene, Color swatches, Library, Transformation, Object properties, Bitmap, Ruler, Grid, Guide, Snapping. Teaching how to create basic vector shapes using drawing tools, intersecting shapes within a single layer, Creating Complex Shapes with Intersecting Lines. Creating complex shapes using the combination of tools and techniques.

UNIT II CHARACTER CREATION, ANIMATION AND RIGGING CONCEPT 15

In this unit, students will be gaining various knowledge and important aspects that go into the creation of characters for animation. Students will be exploring the importance and roles of shape which forms the characters personality; these influence students to create characters in various artistic styles. Understanding of how the timeline organizes and controls a document's content in layers and frames. It also provides the knowledge in components of the Timeline like Layers, Frames (Key frames, In,betweens) and the play head. In this unit student will get a completed knowledge about animation techniques and rigging concepts.

UNIT III ANIMATION IN PRESENTATION AND E- LEARNING

15

In this unit, students will explore animation techniques used for other services like product presentation for corporates, E, Learning for Education Industries and websites for online services. Students will explore through Timeline where the animation occurs in a document, including frame by frame animation, tweened animation and motion path.

UNIT IV INTERACTIVE PRESENTATION

10

In this UNIT, students will explore how to combine designing work and development work together to produce a complete product which will explain the content (about the client service/product) in an interactive method.

UNIT V AUDIO, VIDEO

10

This is the stage where we unlock the secrets and techniques involved in compositing the foreground, background (characters, text, props, objects and elements) and syncing the audio to give weightage for the content/script in a much more interesting way.

Total: 60 Hrs

TEXT BOOKS:

1. Pakhira Malay K, "Computer Graphics, Multimedia and Animation", Second Edition, 2010.
2. Preston Blair, "Cartooning: Animation 1 with Preston Blair: Learn to animate cartoons step by step (How to Draw & Paint)", Walter Foster Publishing, 2003

REFERENCE BOOKS:

1. Preston Blair," Cartoon Walter T. Foster , Apple Press Limited, Eight Edition,1994
2. Amid Amidi "Cartoon Modern : Style and Design in Fifties Animation", Chronicle Books LLC, Second Edition, 2006

Course objective: The objective is to learn the techniques of graphical outputs through tools and utilize them. Students will know the process of using the tools for various digital outputs like pencil drawings, double exposure, posters, color gradation and restoration.

Course Outcome :

At the end of the course, learners will be able to:

CO1: have a very good knowledge in interface tools.

CO2: use different tools to understand tool combinations.

CO3: Create innovate designs for printing and visual graphics

CO4: understand text and design principle and typography

CO5: Create title animation concept and print media designs for varies visual need

UNIT I INTERFACE, SELECTION & RETOUCHING 12

Introduction of Graphics design – About Photoshop , Getting Started with Photoshop, Working with Basic selection ,Working with Images , Layer concepts , Colour correction –Photo retouching

UNIT II USAGE OF TOOLS 12

Painting in Photoshop, Working with the pen tool, Mask effect, Effective Title making, Creating special effects – Creating Web templates, Exporting your work to various formats. Using HDR toning for images, variations, filters and gallery.

UNIT III CREATING DYNAMIC OUTPUTS 12

Introduction of Illustrator, Interface of illustrator, Dynamic Design Tools, Digital Designing works, Front, page design, Making Clipart, Tracing techniques, Business cards , Banners and posters. Using shapes and lines to complete digital works.

UNIT IV DESIGN PRINCIPLES AND TEXT 12

Vector Art Design principles, Logo/Flier Design, Working with Text, Colour and Graphics and Layout, Handling Page Elements, Multiple Pages, Typography for any digital work like brochures, Pamphlets etc...

UNIT V TITLE ANIMATION, PRINT MEDIA 12

Image compositing , print ads making , Magazine , Adjusting Print Settings, color grading for printing work and vector for digital printing, Title creation for various designs.

Total: 60 Hrs

TEXT BOOKS:

1. Philip B. Meggs, Alston W. Purvis, Meggs' "History of Graphic Design", 5th Edition November 2011.
2. James D. Foley, Andries van Dam, "Computer Graphics: Principles and Practice in C" Publisher: Addison, Wesley Professional (2nd Edition) 2nd Edition1982.

REFERENCE BOOKS:

1. Kelly McCathran and video2brain, “Adobe Photoshop CS6: Learn by Video”: Core Training in ANIMATION by (Jun 18, 2012)
2. Peter Lourekas and Elaine Weinmann ,”Visual QuickStart “GuideA, ug 18, 2012

Course objective: Practice the art of framing your shot and how to recreate traditional camera moves. Student successfully learns to compose a sequence of traditional camera shots with techniques employing five C's of Cinematography principles.

Course Outcome

At the end of the course, learners will be able to:

CO1: understanding of various camera angles such as Bird's Eye, POV technique, Voyeur, Reflection, Shadow, Silhouette etc.

CO2: understanding the continuity of camera movements and angles such as Time continuity, Space Continuity, Directional Continuity, 180, degree rule, Camera Tracking, Entrance and Static Screen Direction etc.

CO3: gain knowledge about various cutting shots such as Cutting techniques, Jump cutting and smooth cuttings, cross, cutting etc.

CO4: gain knowledge about close up shot, shot framing, shot placing, detailing and Close ups hide or reveal information.

CO5: gain knowledge about composition of camera with Line Angles, Horizontal & vertical lines, Rule of Thirds, Framing, Extreme Long , Medium Long , Long (LS), Wide shot, Medium shot.

UNIT-I 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 -II 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 IV 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-IV STORY, NARRATIVE AND PLOT

Elements of story – Resources and ideas from life – Narrative modes – Aesthetics of narration- Narrative point of view. Voices of the story - Character voice - Unreliable voice - Epistolary voice. Structuring the story -Plot & sub plots -Plot devices – Other Devices – Dramatic structure – Conflict - Setting mood - Rising action -Falling Action –Dénouement – Resolution

UNIT-V STORY GENRES

Characters and the story- Developing Characters, Story, Telling and its relevance in society-character driven stories – Event driven stories.

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
5. Principles of Animation - https://en.wikipedia.org/wiki/12_basic_principles_of_animation
6. Comic Book Design: The Essential Guide to Creating Great Comics and Graphic Novels
Gary Spencer Millidge
7. Facial Expressions: A Visual Reference for Artists, Mark Simon, Publisher: Watson-Guption, ISBN10: 0823016714, ISBN-13: 978-08230167163
8. The Animation Book: A Complete Guide to Animated Filmmaking--From Flip-Books to Sound Cartoons to 3- D Animation, Three Rivers Press; ISBN-10: 0517886022

Course objective: It provides an introduction to 3D software, where the student will learn to do 3D Set Modeling, Human Modeling, and Automotive. Animate the model and take a rendered out.

Course Outcome:

At the end of the course, learners will be able to:

CO1: understanding software interface and character modeling

CO2: understanding texturing, shading, rigging and Animation

CO3: understanding lights, camera and materials

CO4: understanding 3D paint effects

CO5: gain knowledge about rendering, tracking and compositing

UNIT I INTRODUCTION TO 3D SOFTWARE 10

Introduction of 3D Animation, Introduction of 3D Software's and the Screen Interfaces. Introduction to Animation and Animating Shapes, Fundamentals and basic tools.

UNIT II INTRODUCTION TO BASIC MODELING USING 2D SPLINES AND 3D MODELING 16

Basics of 3D modeling with 3D. Exploring the Max Interface, Controlling and Configuring the Viewports. Working with Files, Importing and Exporting, Customizing the software Interface and Setting Preferences. Creating and Editing Primitive Objects, Selecting Objects, Setting Object Properties and Using Layers and the Scene Explorer. Transforming Objects, Pivoting Aligning, and Snapping. Cloning Objects and Creating Object Arrays, Grouping, Linking and Parenting Objects. Learning Modeling Basics, Working with Sub objects and Helpers. Introducing Modifiers and Using the Modifier Stack. Drawing and Editing 2D Splines and Shapes. Modeling with Polygon, Building Complex Scenes with XRefs and Using Vault. Working with the Schematic View, Using Animation Layers and the Motion Mixer. Understanding Rigging and Working with Bones, Working with Inverse Kinematics, Creating and Animating Bipedes and Crowds.

UNIT III PRODUCTION PLANNING FOR PORTFOLIOS 10

Introduction to Modeling and Texturing, Lighting and Rendering, Rigging and Animation. Advanced production, Development of scenes with specialization, Compiling of works and Visual Effects addition. Creation of Portfolios and Show reel production

UNIT IV INTRO TO PAINT EFFECTS**12**

Introduction to Paint Effects, Paint Effects Tools and Windows. Brush Node, Basics Brush Shading. Tube Growth Parameters, Forces and Flow Animation. The Paint Effects Menu , The Stroke Shape Node , Wrap,up

UNIT V TRACKING FUNCTIONS**12**

Screen Interfaces of Match moving and Camera Tracking, Principle of Match moving camera and Tracking. Calibration and Point,cloud projection. Ground, plane determination. Reconstruction , 2D vs. 3D, Automatic vs. interactive tracking, Tracking mattes.

Total: 60 Hrs**TEXT BOOKS:**

1. Kelly L. Murdock – “Kelly L. Murdock's Autodesk 3ds Max 2015 Complete Reference Guide”, Perfect Paperback – 8 Oct 2014.
2. Kelly L. Murdock – “Autodesk Maya Basics Guide 2015”, 21 November 2014

REFERENCE BOOKS:

1. Randi L. Derakhshani (Author), Dariush Derakhshani (Author) “Autodesk 3ds Max 2015 Essentials” Autodesk Official Press 1st Edition – 2015.
2. Matt Chandler “3ds Max Projects: A Detailed Guide to Modeling, Texturing, Rigging, Animation and Lighting Paperback” – Import, 1 Mar 2014.
3. Dariush Derakhshani “Introducing Autodesk Maya 2016” , Autodesk Official Press Jul 27, 2015
4. Todd Palamar “Mastering Autodesk Maya 2016” , Autodesk Official Press 1st Edition

Course Objectives:

This course provides students the fundamental skills required to develop character design that is considered appealing by the 2D Animation industry leading up to the Portfolio course.

Course Outcome:

To guide the students from developing an idea through to a story creation, to storyboards, animatics, character designing and animating it.

Character design for animation with an understanding of different forms and shapes involved to create a cartoon character.

To teach them to apply fundamental principles of animation in both traditional cel animation and in Flash space.

Appropriately plan out their animated scenes visually; To get an understanding of composition and visual storytelling; To gain a basic understanding of character and scene design.

Unit-I: Story-boarding and Animatics

Storyboard – Definition, Importance of storyboarding, Different types of storyboards - Storyboard formats, Elements of storyboarding (Design, Color, Light and Shadow, Perspective, Staging, Composition rules – Concept of panels and its usages - Floor plans - Storyboarding movements - Illustrating camera techniques in a storyboard, Understanding different camera angles and shots, Visual continuity - Transitions - Digital storyboarding. Camera Panning techniques, Zoom-in & Zoom-out, Cut-shot, Dissolve transform, trick shot, hook-up shot etc. Using standard symbols in story-boards to depict the camera angles, zooming options etc.

Create a story-board for their own characters, dialogues, Experiment different types of story-board, Creation of Animatic - Scanning storyboard panels and synchronizing it with the sound tracks.

Unit-II: Character Designing

Character designing - Features of a character - Types/Kinds of characters, Designing props and assets of character, Creating turnarounds/Character model sheets - Blueprints - Character size comparison charts - Character attitude, Classic Cartoon Characters (Humans, Animals, Birds, Reptiles - Cute, Screwball, Goofy, Heavy, Pugnacious – Fairy Tale Characters, Gnomes, Elves, Dwarves, Witches). Principles of Characters and Props Design: 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-III: Cartoon Characters

Basics in creation of Cartoon Characters, Understanding Cartoon Characters, Cartoon character constructions and Character Development, different body shapes for cartoon characters, Head shapes and characteristics, Hands – on Characters, Drawing from Basic Shapes, Distortion of Proportions, Cartoon Faces, Eyes, Mouths, Hair, Nose, Hands, Feet -Facial Expressions, Different styles of characters – Classic, Anime style

Unit-IV: Acting for Animation

Acting for animators - Character acting, Difference between acting for drama and acting for animation – Studies from movies, Basics of animation acting - Posing, Timing, Staging - Voice acting - Expressions - Body language, Body Acting and Gestures, Facial expressions, Feeling of the Character: Actions that show Joy or Inner Torments, Space and Effort, Speech Analysis, Acting for Camera, Techniques of Acting, Pantomime, Voice-over acting.

Unit-V: 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. 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, Understanding the different industries and domains where 2D animations can be used like – Entertainment, Education, Technical, e-learning etc.

Reference Books & Online References:

- 1.An Inspirational Gallery of Finished Works: Richard Taylor
- 2.How to Write for Animation: Jeffrey Scott
- 3.Writing for Animation, Comics and Games: Christy Marx
- 4.Animation Writing and Development: From Script Development to Pitch: Jean Ann Wright
- 5.How to Draw Animation- Learn the Art of Animation from Character Design to Storyboards and Layouts: Christopher Hart
- 6.The Art of the Storyboard - Storyboarding for Film, TV, and Animation: John Hart

Course objective: Concept art will challenge each student in the skill of "World building" using drawings and paintings to create a fully fleshed, imaginary place and characters. This project will be self driven in terms of ideas and specifics.

Course Outcome

At the end of the course, learners will be able to:

CO1: have an in-depth knowledge about create character design.

CO2: acquire a significant knowledge of creatures Design.

CO3: have detailed understanding of Perspective drawings.

CO4: have a thorough knowledge of Creating Environment.

CO5: acquire knowledge of the technique and procedure in Story Board.

UNIT I CHARACTER DESIGN 10

The study of different views of skeleton, movement of bones, front, back, side views of skeleton. Comparing muscle of male and female anatomy, basic difference of male anatomy, and female anatomy, muscle formations on skeleton, comparing feature, head, chest, hip, and pelvic , hand and elbow position, line difference of male and female. The study of complete animal and bird anatomy.

UNIT II CREATURE DESIGN 10

Creating original fantasy creatures. Writing backstories and narratives for creatures. Creating and developing creature worlds. Applying basic design solutions. Making character, creature, and environmental design choices. Understanding the history and development of creature design. Analyzing the merits and demerits of what makes a creature believable. Develop creations inspired by the history of life on this planet

UNIT III PERSPECTIVE DRAWING 8

Perspective drawings, Explain eye level line, vanishing line and vanishing point, teaching types of perspectives, one point perspective, two point perspective, and three point perspectives, study of perspective in buildings cape, learning inter cross measuring meatheads, applying all three perspective in basic geometrical shape, seascape, cityscape.

UNIT IV CREATING ENVIRONMENT 9

Studying historical landscapes, buildings. creating fantasy world, landscapes. creating futuristic architecture, landscapes. weapons, and props. Creating architecture, landscapes. Weapons, and props for science fiction.

UNIT V STORYBOARD**8**

Types of layouts, concept and story developing, idea, script Foreground, Middle Ground and Background, Developing Drawing Skills, Shot, Angles, Building the Storyboard, study of Classic Film Examples.

Total: 45 Hrs**TEXT BOOKS:**

- 1.Scott Robertson & Thomas Bertling, “How to Draw: Drawing and Sketching Objects and Environments from Your Imagination”, Design Studio Pr, 2013
- 2.Sean Andrew Murray, “Sketching from the Imagination: Fantasy”, Publishing 3DTotal, 2014

REFERENCE BOOK:

- 1.Elliott J Lilly, “ Big Bad World of Concept Art for Video Games: An Insider's Guide for Students”, Design Studio Press, 2015

Course objective: This course will teach architectural representation through the use of digital compilation techniques, specifically digital painting with the aid of Photoshop, digital modeling programs, collage and a drawing tablet. Drawing from a long history of architectural depiction in art, we will utilize every tool at our disposal to narrate an architectural story or propose an architectural argument.

Unit I Introduction to Matte Painting

10

Introduction about Matte Painting, Understanding the difference between Concept Art and Fantasy Art, thumbnail sketching and ideation, layout sketching by hand drawing, working in software using the Pen Tablet , converting paper to Digital, file format and file size, Aspect Ratio, 2K Resolution.

Unit II Sketching and Painting

10

This is unit, student learning about Brush stroke, ruler and grid, Rule of third, gradients, Light , shadow, Layers concept, smudge , blur, Overlays, texture, various shapes and sizes of brushes, working with paint tools, mask and layer adjustments.

Unit III Perspective Concepts

8

In this unit covering the concept of Perspective, types of perspective, understanding the significance vanishing point, Linear Perspective with one point, two points and three points , above eye level, below eye level, Collage techniques, working with atmospheric perspective,

Unit IV Colour Concepts

9

Understanding the colour composition, colour perspective, colour shades by atmosphere lighting, highlight, mid tone, shadow, hue and saturation, creating canvas, working with colour correction, merge by colour tone and proportion.

Unit V Image Composition

8

Background making paint material and software layer distribution, Image composting, understanding the Depth of field, Multi-plane set up in composting, matte layers extractions Matching with 3d objects or live action.

Total: 45 Hrs

Text Books:

1. Brian Sum, ShaddySafadi, Levi Hopkins, “Digital Painting Techniques: Volume 5”, 3D Total Publishing, 2013.
2. John Montague, “Basic Perspective Drawing: A Visual Approach”, John Wiley publication, 6th Edition, 2013.

REFERENCE BOOKS:

1. David B. Mattingly, "The Digital Matte Painting Handbook", Sybex publications, 1986
2. David Luong, Damien Mace, Milan Schere, "d'artiste Matte Painting 3", Ballistic, 2013
4. Glyn Salkin, "Sound recording and Reproduction" Oxford focal press, 1996

Course objective: This course deals with the fundamentals of film direction and filmmaking. It exposes the students to the concepts, techniques and conventions practiced in filmmaking. Students also gain an understanding on different methods and development of a filmmaking project such as feature film, documentary film and a film commercial.

Course Outcome

At the end of the course, learners will be able to:

CO1: have a deeper and detailed understanding of various concepts associated with direction.

CO2: understand the vocabulary, codes and concepts of discourses of visual reproduction.

CO3: gain knowledge of film making through visualization and composition.

CO4: have a thorough understanding of camera shots and movements, screenplay writing and audio video narratives.

CO5: acquire knowledge of the technique and procedure in film making.

UNIT I ANIMATION PROCESSES

15

Covers the entire process from script to screen in process for an animation film (short or feature) Overview of the Process. Preproduction, Production, Post Production. A comparison between live action film making & animation The primary difference being that an animation film tends to be pegged down pretty accurately by the end of the preproduction process itself whereas for a live action film it is close to completion only at the end of editing which is a post production process.

UNIT II PREPRODUCTION

15

Story to Script . Whether adapted or original, taking the story from a verbal or spatial medium like a book or graphic novel to a form suitable for making a film. What makes a good story? Plot & Character: Action Plots & Mind Plots. Analysis of different types of plots . Archetypes v/s Stereotypes - understanding of archetypes and a brief introduction to the monomyth (hero's journey) . Why Animation? (instead of live action) Animation as a storytelling (narrative) medium.

UNIT III PRODUCTION

15

Animation Acting - Animation is not about moving images but moving people . Traditional 2D animation. a. Linetests – Key frames & Timing (breakdowns in between) also brief introduction to thumb nailing (for quick exploration of alternative methods of animating a scene) . Study comparisons between different rhythms of animation . Executing straight ahead and in between planned animation, limited animation and full animation. Drawing key frames, breakdowns, in between, animation cycles . Cleanups .

UNIT IV POST PRODUCTION

15

Voice, Music & Effects . Understanding the dynamics of sound design and use of sound as a key component of animation . Designing a soundtrack for animation including music, dialogue, voiceovers, lip synch and FX . Recording and mixing multiple tracks. Post processing sound

Compositing & Editing .Work in Progress. Development of a film from Animatic to Edit with different scenes at different stages. Coming together of the various elements of the scene . Final Mixing of Sound & Final Edit. Understanding the dynamics of camera moves and magnifications . Experimenting with camera techniques and working directly under camera. - Using registration fields, table moves and peg movements. Screening & Feedback . Pitching a Project, Financing, Production & Distribution

UNIT V VISUAL FORM

15

Exploring the look and feel for animation through concept art . Planning character design, layout design, illustration style, composition, staging, backgrounds . A study of indigenous design and painting, both contemporary and traditional to understand and analyze a variety of styles and visual language

Total: 75 Hrs

REFERENCE BOOKS:

- Shamus Culhane, Animation from script to screen, St.Martin's Griffin Press, NY, 1990
- Richard William, The Animator's Survival Kit, Faber and Faber, New York, London, 2002
- Kit Laybourne, The Animation Book, Crown Trade Paperbacks, NY, 1998
- Tony White, The Animator's Workbook- Step by Step Technique of Drawn Animation, Watson-Guptill Publications, 1988

- Mascelli Joseph V, The Five C's of Cinematography: Motion Pictures Filming Techniques, Silman-James Press, 1998

- Daniel Arijon, Film Technique, Silman-James Press, 1991

- David Sonnensch, Sound Design: The Expressive Power of Music, Voice and Sound Effects in Cinema, Michael Wiese Productions, 2001
- David Lewis Yewdall, Practical Art of Motion Picture Sound, Second Edition, Focal Press, 2003

Course objective: This course explores the whole production process techniques. After taking this course the students will be able to attain skills in managing animation projects. They will get a clear idea about the pre-production, production and post-production.

Course Outcome

At the end of the course, learners will be able to:

CO1: Explore the creativity with the help of new media technology in the form of animation

CO2: Providing the opportunity on initiating the production with help of SWOT analysis.

CO3: Create 2D and 3D characters and environments that reflect the integration of graphic clarity, design principles, performance principles and theoretical constructs.

CO4: Gain In-depth knowledge in Pre-production, Production and Post-Production methods using computer software..

CO5: Manage targets within the production schedule to effectively achieve completion of required tasks.

UNIT I INITIATION

15

This unit explains the reasons for a project, various aspects like Internal Rate of Return. It also gives knowledge about SWOT as well as Project Selection and Project Chartering.

UNIT II PLANNING

15

This entity deals with planning for the 9 Knowledge areas such as integration management, scope management, cost management, time management, quality management, communication management, risk management, HR management and procurement management.

UNIT III EXECUTION 15

This topic states about the process of executing the plan. It also encloses the concepts of change management.

UNIT IV MONITORING AND CONTROLLING 15

This unit describes the method of Communication and Conflict resolution techniques that arise in the production process.

UNIT V CLOSING 15

This topic gives ideas of reporting, Scope verification, sign offs and Archiving that has to follow in animation production.

Total: 75 Hrs

TEXT BOOKS:

1. Ranjit Singh, "The Art of Animation Production Management", MacMillan India, First Edition, 2013.
2. Williams, R, "The Animator's Survival Kit", Faber and Faber Ltd, First Edition, (2001).

REFERENCE BOOKS:

1. Kupeeberg, M, "A Guide to Computer Animation", Focal Press, First Edition, 2002.
2. Scott, J, "How to write for Animation", The Overlook Press, First Edition, 2002.

Course objective: Designed to provide all the fundamental and advanced skills required to be a successful VFX artist.

Course Outcome:

Co1: Understand Concept in Compositing and VFX

Co2: Get well versed knowledge in Rotoscopy

Co3: Understanding on Camera tracking and its usage

Co4: Understanding on match Moving Techniques

Co5: Knowledge of Final Gathering and get final Rendered Output

Unit 1: Introduction Visual Effects

15

Intro to Compositing tools - Compositing Pipeline- Orientation/Basics - Compositing Essentials - Intro 3D Matte painting- image processing techniques -

Unit II Rotoscopy

20

Intro to Rotoscoping – Marker Removal (Green Screen) – Logo Replacement (3D) – Rod Removal – Screen Burn-ins – Full Body Rotoscoping – Hair Removal- Muzzle Fire – Invisible Effects – Articulate Roto – Reflection Paint-out – Marker Removal – Rig Removal – Ethereal Effects (Ghost)

Unit III Camera Tracking

20

3D cameras - 3D Compositing techniques - Digital matte painting critique - motion tracking camera - Camera & Planar tracking - using movement to control scene changes - Using Depth of Field in 3D Camera - Motion Track & Composite 3d Models Into Live Action Footage - stabilizing the footage.

Unit IV Match Moving

20

2D tracking - 3D calibration - automatic tracking - interactive tracking - camera setting for matchmoving - set fitting - matchamation - tracking mattes - refining real time

Unit V Rendering

15

Intro to rendering Tolls - Final gathering of all items - rendering Formats for 2D and 3d - Animating Maps - Working on Audio - Rendering Techniques- Render queue, Advanced rendering, Pre rendering and proxies

Total: 90 Hrs

REFERENCE BOOKS:

1. Block, Bruce. *The Visual Story*. Focal Press. 2008 - 9780240807799
2. Katz, Steven. *Film Directing Shot by Shot*. Michael Wiese Productions. 1991 - 0941188108
3. Maschwitz, S. *The DV Rebel's Guide*. Peachpit Press. 2007 - 0321413644

Course objective: In this paper students will learn how to use lights in the 3D software. They will learn to take the preferred output from the software for the other works.

Course Outcome

At the end of the course, learners will be able to:

CO1: understanding the advanced lighting with 3d Lighting, Omni, spot light, direct light on polygon models.

CO2: knowledge about Lighting an Interior with sunlight, Light Fog, light Glow, ambient light and Volume Fog.

CO3: knowledge about Advanced Light Rig. Interior Light set and Exterior Light Set.

CO4: detail about Advanced Lighting in Mental Ray.

CO5: detail about Mental Ray Shades with Global illumination.

UNIT I UNDERSTANDING THE BASIC OF LIGHTING

12

Understanding the Art of Lighting. Understanding the color and composition, Understanding Lighting with the basics of Color and composition. 3d Lighting, Omni, spot light, direct light.

UNIT II DIFFERENT TYPES OF LIGHTING AND OBJECT TRANSFORMING

12

Applying the Correct Light for the project. Linking and Unlinking the Lights Using Light Fog and Light Glow. Environment and Volume Fog, Lighting an Interior. Creating and Editing Primitive Objects and Selecting Objects. Setting Object Properties, Using Layers and the Scene Explorer and Transforming Objects. Adjusting Pivoting and Aligning and Snapping , Cloning Objects and Creating Object Arrays.

UNIT III OTHER TYPE OF LIGHTS ADJUSTMENT FOR RIGGING

12

Preparing for Successful Light rigs , 1,2,3 Light Rig. Interior Light set and Exterior Light Set. Environment Light Set and Layered Based Light set. Working with the Schematic View, Using Animation Layers and the Motion Mixer to Understanding Rigging and Working with Bones

UNIT IV RETRACING WITH MENTAL RAY

12

Retracing with 3D Software and Mental ray, Retracing with Mental Ray , Reproducing water, Reproducing Glass, Working with HDRI

UNIT V ABOUT ILLUMINATION AND SHADERS

12

Working with Global Illumination. Final Gather and Mental ray Shaders, Understanding indirect Illumination. Applying Caustics and Applying Mental Ray Shaders. Using Final Gather and Fine Tuning Mental Ray Shaders

Total: 60 Hrs

TEXT BOOKS:

- 1.Kelly L. Murdock – “Kelly L. Murdock's Autodesk 3ds Max 2015 Complete Reference Guide”, Perfect Paperback – 8 Oct 2014
- 2.Kelly L. Murdock – “Autodesk Maya Basics Guide 2015”, 21 November 2014

REFERENCE BOOK:

1. Jeremy Birn “Digital Lighting and Rendering” (3rd Edition) (Voices That Matter) 3rd Edition

Course objective: In this paper the student will know how to make a human model walk, run and jump in a path. The model's body movement is also taught. They are taught how to lip sync with the dialogues with two or more characters.

Course Outcome

At the end of the course, learners will be able to:

CO1: understand how to animate a model in 3D Viewport

CO2: will gain key knowledge in Key frames and graph editor

CO3: will understand various types of constraints to constrain a character model

CO4: understand rigging human model and constrain the rig as per anatomy of the model

CO5: applying a real world motion to a 3D created object

CO6: gain knowledge on Facial expression for 3D animation

UNIT I CONCEPT OF RIGGING

12

Understanding the rigging IK and Fk Constraints. Forward Vs. Inverse Kinematics, A simple leg example. Forward Kinematics with Simple leg example. Inverse Kinematics, Constraints Working with Locators. Adding Pole Vector constraints to the elbows and Constraining the wrists to locators. Testing the character, Rigging Methods and Process. Create the IK handles, Restricting the heel rotation, Build a foot control hierarchy. Creating a control attribute and Set Driven Key, Adding Selection handles for Arms and shoulders

UNIT II INTRO TO IK SOLVER AND IK CHAIN

12

Intro to IK ROTATE PLANE SOLVER, Working with the IK Rotate Plane solver. Creating the arm joints and setting preferred angle, Setting up the IK Rotate Plane solver. Translating the end effector of the IK chain.

UNIT III BENDING AND TWISTING OF KNEE

12

IK AND FK COMBINATION FOOT, Skeleton set,up,Setting up Single Chain IK, Parenting the IK and Orient constraints Parenting the IK , Bending toes and twisting the knee. Adding attributes

UNIT IV ANIMATION PRINCIPLES**12**

Animation Principles and Process, Basic Animation with types of Balls. Working with Animation Editor and Tools. Animation Basics, Key frame Animation, Nonlinear Animation, Path Animation, Motion Capture Animation. Geometry Caching with Animation Layers, Animation Menus, Animation Tools, Animation Windows and Editors, Animation Nodes

UNIT V ANIMATING TWO LEG AND FOUR LEG WITH DIALOGUES**12**

Advanced Character Animation with Two Leg Animation (walk, run, Jump, Weight lifting etc.). Four Leg Animation (walk, run, Jump) Lip sync Animation. Single Character Animation with Dialogues , Two or more character interacting animations with Dialogues. Workflow with Graph, Trax, Dope.

Total: 60 Hrs**TEXT BOOKS:**

- 1.Kelly L. Murdock – “Autodesk Maya Basics Guide 2015”, 21 November 2014
- 2.Kelly L. Murdock – “Kelly L. Murdock's Autodesk 3ds Max 2015 Complete Reference Guide”, Perfect Paperback – 8 Oct 2014

REFERENCE BOOKS:

1. Matt Chandler “3ds Max Projects: A Detailed Guide to Modeling, Texturing, Rigging, Animation and Lighting Paperback” – Import, 1 Mar 2014
- 2.Todd Palamar “Mastering Autodesk Maya 2016” , Autodesk Official Press 1st Edition

Objective:

To help students get exposed to actual situations and functioning of the media industry and experience reality.

Methodology:

The student will be attached to the media industry for a period of 30 days during the second semester vacation on an internship basis. The intern will be exposed to a particular area of specialization. The department in coordination with the industry will closely monitor the progress of the intern. He / she should submit the Report along with the certificate in bounded form. Report Evaluation and Viva-voce in the third semester will complete the process.

Course Outcome:

At the end of the course, learners will be able to:

CO1: Giving an opportunity to explore various career possibilities in ANIMATION.

CO2: opportunity to learn those disciplines, skills and attitudes which can best or only be learned on the job, especially self-discipline, teamwork, responsibility, and initiative.

CO3: Further develops practical skills in a real-world context.

CO4: Providing an opportunity to strengthen your portfolio or resume tape with practical experience and projects.

CO5: Providing a learning experience for the student, and can lead to entry level job opportunities within the company

Course objective: To sensitize students to media research and enable students to independently conceive, execute research projects and to provide insights about communication research.

Course Outcome

At the end of the course, learners will be able to:

CO1: have a thorough knowledge of the basic concepts, nature, characteristics, elements, scope, types and problems of research.

CO2: have a detailed understanding of sampling in media research.

CO3: significant knowledge of Research procedure and its types.

CO4: understand the use of statistics for quantitative research.

CO5: acquire skills for research designing by understanding the structure and format of a research paper.

UNIT I **BASICS OF RESEARCH** **18**

Basic concepts, meaning and definition of research, nature and characteristics of scientific research, Elements of social science research, Nature and scope of media research, Ethical problems in media research, Quantitative and qualitative research.

UNIT II **SAMPLING** **18**

Sampling: definition, types of sampling, Sampling distribution, Sampling Error, Advantage and Disadvantage of Sampling in Media Research. Selection of the problems; Meaning and characteristics of problems. Hypothesis: Types of Hypothesis. Variables, Types of variables. Scales of Measurements

UNIT III **RESEARCH PROCEDURE** **18**

Types of Research, laboratory experiments, field experiments, field studies, ex post facto, survey, observational, content analysis, comparative studies, historical, case studies, Discourse analysis, framing analysis, focus group discussion and action research, audience research, TAM, TRP.

UNIT IV **RESEARCH DESIGN** **18**

Purpose of research design, principles of design, and types of research design. Writing research report, structure and format of research report.

UNIT V **STATISTICS IN RESEARCH** **18**

Statistics in Research, sample and population, data organization. Central tendency, parametric and non-parametric tests. Application of SPSS.

Total: 90 Hrs

TEXT BOOKS:

1. Roger D. Wimmer and Joseph R. Dominick, “Mass Media Research: An Introduction”

Thomson Wadsworth Publications, Seventh Edition, 2003.

2. Arthur Asa Berger. "Media and Communication Research Methods: An Introduction to Qualitative and Quantitative Approaches", Sage Publication, New Delhi, 2000.
3. Susanna Hornig Priest. "Doing Media Research: An Introduction", Sage, New Delhi, 2009.

REFERENCE BOOKS:

1. Berger J jump, "Media and communication methods: on introduction to qualitative and quantitative approaches", Sage publication, 2000.
2. Ranjit Kumar, "Research Methodology", Pearson Education, 2005

Course objective: Learning the techniques and understanding the various methods, developing skills and techniques to create special effects and to know the interface used in creating visual effects. And to know the physical properties of environmental fields to apply in the effects.

Course Outcome

At the end of the course, learners will be able to

CO1: understanding about nparticles

CO2: gain knowledge on Rigid body animations

CO3: have a depth knowledge about animating particle by using different types of fields, using different types of emitters to create effects such as steam, rain, fire, snow, cloud, smoke and explosion

CO4: have an in-depth knowledge about fluids and special effects

CO5: understanding and animating cloth and fur

UNIT I PARTICLES AND FIELDS

10

Introduction to dynamics and explaining how it uses the rule of physics to simulate natural forces, overview of particles such as dots, streaks, spheres, blobby surfaces and other item, Animating particle by using different types of fields, using different types of emitters to create effects such as steam, rain, fire, snow, cloud, smoke and explosion. 2D and 3D grid particles. Animating the particle using a goal, To make the particle move with the surface and parent them, setting the color for particle, Instancing the geometry to particles, Instancing strokes from paint effects, Understanding the difference between Hardware render and software render.

UNIT II SOFT BODIES AND RIGID BODIES

8

Understanding the behavior of soft body and rigid body, Rigid body Constraints of like nail, pin, hinge, barrier and spring. Painting the soft body weights tool

UNIT III RENDERING PARTICLES

9

Hardware rendered particles,use the particle cloud shader, particle sampler info node,use user defined attributes,set the particle tool options,place particles on a surface,animate particles,work with particle attributes,static attributes,dynamic attributes,add custom attributes.advance hardware render techniques.

UNIT IV FLUID EFFECTS

8

Introduction to Fluid Effects, Coloring the fluids, Designing Clouds Background , Designing Fog Effects , Explosion Effects and Fire Effects with flames, Space Effects and designs, Designing Thick Smoke.

UNIT V ADVANCED SPECIAL EFFECTS**10**

Designing Special Effects, Designing effects of Fur and shape, Designing Fur Effects, Designing Cloth & Clothes and effects. Visual Effects Tool and advanced functions, stereoscopy Conversion from 2D to 3D Pictures. Creating 3D Effects, Differentiation 2D effects and 3D effects, plugins, particle nodes, sprite wizard.

Total: 45 Hrs**TEXT BOOKS:**

1. Doug Kelly, "Digital Compositing in Depth", Coriolis Publication, 2003.
2. Angie Taylor, "Creative After Effects 5.0", Focal Press, 2002.

REFERENCE BOOKS:

1. Ron Brinkmann,. "The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion", Morgan Kaufmann Publishers, 2008.
2. Steve Wright, " Digital Compositing for Film and Video", Focal Press, 2010.
3. Lee Lanier,"Professional Digital Compositing: Essential Tools and Techniques", Wiley Publishing Inc., 2010.

Unit: IV Portrait

15

This unit encourages the student to (x) portray humans and monuments etc effectively.

Unit: V Effects

15

This entity presents the students to do (xi) Silhouette, (xii) Special effects, (xiii) Freezing Movement and (xiv) Panorama.

Total: 90 Hrs

REFERENCE BOOKS:

1. James Folts, Ronald P. Lovell, Jr. Fred Zwahlen “Hand Book of Photography” Thompson Delmar Learning; 6 edition, 2005.
2. Tom Aung, “Fundamentals of Photography: The Essential Handbook for Both Digital and Film Cameras”, Knopf (November 25, 2008)
3. Richard Zakia, Leatie Stroebel, “The encyclopedia of photography” , Focal Press – London, 3rd edition -1993.
4. Ralph E Jacobson/Geoffrey G Attridge/Sidney F Ray, “The Manual of Photography”, Focal Press, 9th Edition (2000).

Students are expected to submit the projects on any one of the following

1. 3D Animation (minimum 3 minutes)
 - ❖ 3D, Model (Character and set modelling with lighting and texturing).
 - ❖ Walk through camera animation for interior design of houses or offices.
 - ❖ Title Animation
 - ❖ Walk cycle.

OR

2. 3D SHORT FILM (minimum 3 minutes).

Course Outcome

At the end of the course, learners will be able to:

CO1: understand to do scripting for a basic show reel

CO2: understand how to model 3D model for the show reel

CO3: understand how to animate 3D model for the show reel

CO4: gain knowledge on rendering, lighting and texturing

CO5: gain Knowledge on compositing Render 3D to real time 2D video

UNIT I: CONCEPT FOR THE FILM AND CHARACTER MODELING

36

Students are expected to create concepts for their short film. Character for the short film should be designed along with the concept. They have to get the approval of the concerned faculty member's approval.

UNIT II: STORYBOARDING

36

The Story line is briefed in the paper as drawing with the shorts and scenes.

UNIT III: CLAY MODELING

36

The character in the short film is made in the clay and photoshoot is done

UNIT IV: CREATING THE BACKGROUND **36**

Creating a basic set and background design based on the story line.

UNIT V: FINAL FILM **36**

Finally the character and the background and the animated sequence is combined together to achieve the final output.

Total: 180 Hrs

Objective:

To help students get exposed to actual situations and functioning of the media industry and experience reality.

Methodology:

The student will be attached to the media industry for a period of 30 days during the second semester vacation on an internship basis. The intern will be exposed to a particular area of specialization. The department in coordination with the industry will closely monitor the progress of the intern. He / she should submit the Report along with the certificate in bounded form. Report Evaluation and Viva-voce in the third semester will complete the process.

Course Outcome:

At the end of the course, learners will be able to:

CO1: Giving an opportunity to explore various career possibilities in the field of Animation

CO2: opportunity to learn those disciplines, skills and attitudes which can best or only be learned on the job, especially self-discipline, teamwork, responsibility, and initiative.

CO3: Further develops practical skills in a real-world context.

CO4: Providing an opportunity to strengthen your portfolio or resume tape with practical experience and projects.

CO5: Providing a learning experience for the student, and can lead to entry level job opportunities within the company.

Syllabus
Discipline Specific Elective Courses

Course objective: This course focuses on the skills required of an animation art direction, concentrating on basic drawing, as well as work in digital media, interactive design and perspective drawing. Students learn anatomy study, environment study and cartoon character study. It emphasizes creativity, execution, teamwork and project management skills.

Course Outcome

At the end of the course, learners will be able to:

CO1: have an in-depth knowledge about basic drawing.

CO2: have detailed understanding of Perspective drawings.

CO3: gain knowledge of anatomy study.

CO4: acquire knowledge of the technique and procedure in cartoon character study

CO5: have a thorough knowledge of Creating Environment study

UNIT I BASIC DRAWING PRACTICES 12

Free hand practice, lines, ovals, rounds, curves, forms & shapes, geometrical forms, non-geometrical forms, shading, shading levels, shading techniques, types of shading, light & shadow, direction of light & shadow, geometrical forms with Shading, Still Life, introduction arrangement, composing, sketching, still Life with shading, Still life final drawing. (Geometrical shapes) Creating texture, wood, rusted leaf, skin, cloth, stone, sand, tactile texture

UNIT II PERSPECTIVE 12

Introduction of Perspective, Importance of Perspective, Perspective terminology, Horizon line / eye level, Vanishing point, View point, Orthogonal line, Ground line, Picture plane, Types of perspective views, Aerial perspective vs. Linear perspectives, Types of linear perspective, One point perspective, Two point perspective, Three point perspective, Bird's view, Worm's view

UNIT III ANATOMY STUDY 12

Line of Action, Balance (different possess), Stick figure male & female with measurement, stick figure with cylindrical form /volume sketch, Front vs. side with measurement, Quick sketches, Study form live, Foreshortening, Overlapping, Balance – Hand study, Feet study.

UNIT IV CARTOON CHARACTER STUDY 12

Cartooning, Head types, Cartoon eyes, Cartoon noses, Cartoon mouths, Cartoon ears, Hands and feet, Body types and proportions, Developing a cartoon character out of an object, Various action poses of a cartoon character.

UNIT V ENVIRONMENT STUDY

12

2D background design, Landscape, cityscape and seascape, Colorful Background design – Layer alignment – Creating shots for scene, Storyboard

Total: 60 Hrs

TEXT BOOKS:

1. Bert Dodson, “Keys to drawing”, Published by North Light Books Fw Media, Reprint edition 2013
2. Ron Tiner, “Drawing from Your Imagination”, David & Charles Publications, 2008.

REFERENCE BOOKS:

1. Bob Godfery and Anna Jackson The Do It, Yourself Film Animation Book, , BBC Publications, Edition I, 1974
2. Thomas, Frank and Johnston, “Disney Animation: The Illusion of Life”, Ollie Abbeville Publications, 1997

Course objective: This subject will explore the basic concepts of Storyboarding and allow students to create and review storyboards of their own. Concepts addressed will include: tools, methods and techniques, visual storytelling and narrative structure, shot composition, “acting,” and character development, among others. Following this course, students will have the basic skills necessary to produce their own workable storyboards and/or animatics and will have a strong foundation in the fundamentals of sequential visual narrative.

Course Outcome

At the end of the course, learners will be able to:

CO1: have a very good knowledge of planning processes of visual storytelling.

CO2: Gain knowledge about Types of layouts, concept and story developing ideas, Types and concepts.

CO3: have detailed understanding of, posing, staging and camera move, Shot and camera angle

CO4: create cartoon work, graphic novel style.

CO5: create book illustration in different style and technique

UNIT I THE STORYBOARDS BEGINNINGS 10

Introduction to storyboarding, Pre Production process, Basic of Storyboards, screenplay and picturing, shots and storyboard panels., script, one line order, types of storyboard technique, Thumbnail storyboards, and the planning processes of visual storytelling. shot types, continuity, pacing, transitions and sequence, cinematic ,storyboard

UNIT II BASIC OF THE STORYBOARD 10

Types of lay outs, concept and story developing, idea, script Foreground, Middle Ground and Background, Developing Drawing Skills, Shot, Angles, Building the Storyboard, study of Classic Film Examples,

UNIT III SHOT ANGLES 10

Shot types, angles cuts, posing, staging and camera move, Shot and every camera angle, tilt, pan close,up extreme close up, Extreme Close,Up Establishing Shot, Long Shot background, Medium Shot, low angle, high angle, different perspectives,

Course objective: In this paper the student will be reading about 2D animation and the advantages in making a 2D film.

Course Outcome

At the end of the course, learners will be able to:

CO1: Manage targets within the production schedule to effectively achieve completion of required tasks.

CO2: Create 2D characters and environments that reflect the integration of graphic clarity, Design Principles, animation principles and concepts.

CO3: Implementing the production pipeline by using technology effectively in the development of animation projects.

CO4: Use critical thinking skills and problem solving strategies in all dimensions of project development.

CO5: It develops creativity and the ability to bring characters to life

UNIT I INTRO TO BASIC OF 2D ANIMATION CONCEPT AND SOFTWARE 9

Introduction to Animation and Animating Shapes. Fundamentals of Digital Animation, Animation Principles and Process. Character Construction Sheet in 2D Animation software. Tools of 2D Animation

UNIT II STORY BOARDING AND VISUAL PLANNING 9

Animating Walk cycle, Breaking down a Character and Animating. StoryBoard Basics, Stop Motion Animation. Basic Multi planning and Scene planning. Visual Break Down and Lip sync

UNIT III STORYBOARDING FOR MAKING MOVIE CLIPS FOR WEB 9

Storyboarding Staging and Exploring current trends in web design and development. Examining Flash sites. Publishing , Publishing and Output Calling Movie Clips and Creating a Multi,SWF site , Preparing a Flash movie, Including tools and best practices , Movie optimization and publishing Movie protocols , Calling Movie Clip Instances = Multi SWF site creation .

UNIV IV ANIMATION BASIC 9

Animation basics , Creating motion , Creating keyframes , 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 .

UNIT V TRACKING AND DIGITAL ANIMATION

9

Difference Between CG Camera and Live Camera, Live Tracking – Features of Boujou Animation , Advanced 2D Production and Post,Production , Drawing with ToonBoom ,Animation with Flash,Key framing and Inbetweening,Digital Animation Scene Planning,Digital Animation Ink and Paint , Digital Animation Compositing and Effects

Total: 45 Hrs

TEXT BOOK:

1. “Cartoon Animation”, Preston Blair, Walter T. Foster, Apple Press, Limited, Eighth Edition

REFERENCE BOOK:

1. “Cartoon Modern: Style and Design in Fifties Animation”, Amid Amidi, Chronicle Books LLC, 2nd Edition,

Course objective: Learning the techniques and understanding the various methods in matchmoving. Develop skills and techniques to create tracking points and to know the interface used in creating matchmoving. And to know the basics of matchmoving with live footage and 2D, 3D tracking techniques.

Course Outcome

At the end of the course, learners will be able to:

CO1:Understanding the importance of Matchmoving for integrating CG elements into live action footage, tracking algorithm and motion tracking algorithm is done to help students understand how 2d and 3d objects work in a live environment.

CO2:Matchmoving is related with motion tracking or camera solving, rotoscoping and photogrammetry. template, camera tracking, ground plane determination. Reconstruction Are related techniques to matchmoving it helps in the study of making live footage.

CO3:Basic Camera animation, Matte tracking, Body tracking, Face tracking, techniques are taught, motion capture technique, placing tracking points on humans and relating them to the objects in 3d which helps the students to enhance their knowledge for future production outputs.

CO4:To learn the match moving your CG character or object with live action plate, basic compositing process to explore the match mover role on live action footage is done so that the students can do advanced compositing and match moving. It helps them create better outputs.

CO5: 2d tracking with every track count is being analyzed, how 3d stereo movies affect match movers match moving capabilities and algorithm is being initialized and taught in process. Compositing and lighting process helps them to know what is really going on in footage.

CO6: Matchmoving process is one of the important elements for compositing 3d elements, and tracking helps do that. The students get to know about how visual effects and compositing process is done in production

UNIT I INTRODUCTION TO MATCHMOVING

9

Understanding the importance of Matchmoving for integrating CG elements into live action footage. The movement ensures the angles of 3D rendered output are the same angles of the live footage. Basic application with matchmoving capabilities. Basics of tracking algorithm, basics of motion tracking algorithm.

Course objective: Compositing is the combining of visual elements from separate sources into single images, often to create the illusion that all those elements are parts of the same scene. Digital compositing is an essential part of visual effects that are everywhere in the entertainment industry today.

Course Outcome

At the end of the course, learners will be able to:

CO1: Students explore the rotoscope technique involved in creating shapes which are used to isolate or mark elements in footage, such as characters, vehicles, buildings etc. color correction, keying, paint and effects are done by analyzing the footage a several times before it can be changed, It's a unique technique that teaches the fastest and most accurate way to extract an object.

CO2: 2d and 3d tracking techniques helps in identifying which object is combined to tracking object and then it is being modified, 2d and 3d layer compositing techniques using tool which lie in the science of photogrammetry helps student to explore different layers composited as one output.

CO3: Live action compositing helps in bringing in various elements from different shots and 3d outputs arranged in one single background .It shows how to composite various different layers into single image., we will look at the match move, where separate programs are used to analyze the live action and provide terrain and camera data for the CGI programs.

Students explore live action compositing techniques as a whole.

CO4: we cover the workflow of stereoscopy which follows the four major departments such as Rotoscopy, Matte Extraction, Clean plate and Stereo conversion process. Student will explore the pipeline of stereoscopy and how it is exhibited in 3d using 3d glasses for analyzing the output.

CO5: render for broad casting and filming process is done. we teach about the bit depth of colors and various output formats with aspect ratio. Also provide them with various footage and let them know how compositing for movies is done.

CO6: it makes students understand the pipeline and workflow of production which helps them to move to higher standards when it comes to doing different outputs.

UNIT I ROTOSCOPY & KEYING

10

In this unit, Students explore rotoscopy involving creating shapes which are used to isolate or mark elements in footage, such as characters, vehicles, buildings etc. This method of creating selections allows to perform specific operations like color correction, adding additional layers, dynamic effects etc. Rotoscopy is the first step in the process of digital compositing. Students explore keyer techniques which involve Luma key and Chroma key. This topic covers a wide knowledge about the RGB channels and its uses. It's a unique technique that teaches the fastest and most accurate

Course objective: Learning the techniques and understanding the various methods in dynamics. Develop skills and techniques to create special effects and to know the interface used in creating visual effects. And to know the physical properties of environmental fields to apply in the effects.

Course Outcome

At the end of the course, learners will be able to

CO1: understanding about Advanced particles

CO2: gain knowledge on Rigid body animations

CO3: have a depth knowledge about animating particle by using different types of fields, using different types of emitters to create effects such as steam, rain, fire, snow, cloud, smoke and explosion

CO4: have an in-depth knowledge about fluids and special effects

CO5: understanding and animating cloth and fur

UNIT I **ADVANCE PAINT EFFECTS** **9**

Introduction to visor, Designing Paint Effects , Coloring paints, Designing Trees and green effects ,Designing Weather and seasons ,Effects on seasons, Designing Glass image, Designing Different glass reflection, Designing Glow Effects, Liquid Effects and reflection design,Instancing strokes from paint effects,

UNIT II **ADVANCED PARTICLES** **9**

dynamics and explaining how it uses the rule of physics to simulate natural forces, overview of particles such as dots, streaks, spheres, blobby surfaces and other item, Animating particle by using different types of fields, using different types of emitters to create effects such as steam, rain, fire, snow, cloud, smoke and explosion.Goal concepts 2D and 3D grid particle. Animating the particle using goal, Instancing the geometry to particles,

UNIT III **ADVANCED SOFT BODIES AND RIGID BODIES** **9**

Understanding the behavior of soft body and rigid body, Creating soft bodies and rigid bodies, Rigid body Constraints of like nail, pin, hinge, barrier and spring. Painting the soft body weights tool,Change or turning off the constraint type, Convert rigid body animation to keys.

UNIT IV **ADVANCED FLUID EFFECTS** **9**

Fluid Effects, Coloring the fluids, Designing Clouds Background , Designing Fog Effects , Explosion Effects and Fire Effects with flames, Space Effects and designs, Designing Thick Smoke,water stimulation

UNIT V ADVANCED SPECIAL EFFECTS

9

Designing Special Effects, Designing effects of Fur and shape, Designing Fur Effects, Designing Cloth & Clothes and effects. Conversion from 2D to 3D Pictures. Creating 3D Effects, Differentiation 2D effects and 3D effects.

Total: 45 Hrs

TEXT BOOKS:

1. Doug Kelly, “Digital Compositing in Depth”, Carioles Publication, 2003.
2. Angie Taylor, “Creative After Effects 5.0”, Focal Press, 2002.

REFERENCE BOOKS:

1. Ron Brinkmann, “The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics” ,Morgan Kaufmann Publishers, 2nd Edition, 2008.
2. Steve Wright, “ Digital Compositing for Film and Video”, Focal Press, 2010.
3. Lee Lanier, “Professional Digital Compositing: Essential Tools and Techniques”, Wiley Publishing Inc., 2010.

Course objective: It provides introduction to UV ,how to apply the texture, unwrap the biped , waptopad character, give the material, mapping, painting, nodes learning, effect mapping, edit uvs, texture editor ,type of mapping, glowing ,2d and 3d texture.

Course Outcome

At the end of the course, learners will be able to:

CO1: understanding texturing and shading

CO2: understanding different types of materials

CO3: gain knowledge about different types of UV mapping

CO4: understanding UV layout and editor

CO5: gain knowledge about applying UV texture in different types of 3D models

UNIT I INTRODUCTION TO UV 9

Texturing and Shading – Intro to Hyper shade, UV mapping overview, Mapping UVs – Modeling and Texturing effects , UVs menu reference ,UVs windows and editors reference ,UVs tool reference ,Nodes and Materials, General Utilities, Image Based mapping , Editing UVs , UV sets – UV unwrapping overview – UV painting Photoshop and Corel – Coloring

UNIT II MATERIALS 9

Introduction of materials, types of materials , hypershade ,surfaces ,volumetric, displacement , 2d and 3d texture , env textures, utilities , glowing, reflection ,image plane ,bump mapping , colors ,transparency ,reflectivity ,double shader ,blinn , Lambert ,layer surface , phong , phong e, anisotropy, ramp shader, surface shader, ocean shader ,hube shader, shading map, displacement, checker ,cloth, mountain ,ramp , fractal ,noise ,buldge .

UNIT III UV 9

Planar mapping ,cylindrical mapping, spherical mapping , automatic mapping, create uvs based on camera , best plane texturing tool, create empty uv set, copy uvs to uv set, set current uv set , uv set editor , per instance sharing,

UNIT IV EDIT UVS 9

Normalize ,utilize ,flip ,rotate ,layout rectangle ,grid ,align ,warp image ,map uv border, straighten uv border, relax, unfold, layout, cut uvs edges, split uvs, sew uv edges ,move and sew uv edges ,merge uvs ,delete uvs ,uv texture editor.

UNIT V UV TEXTURE EDITOR

9

Character head uv ,hand uv ,forearm uv ,finger uv ,ankle and foot uv ,uv lattice ,move uv shell, smooth uv, shortest edge path tool, uv smudge tool, rotate selected uvs clockwise ,rotate uvs anticlockwise ,flips uvs u direction, flip uvs v direction, uvs cut, move and sew the edges ,separate edges, uvs together ,selected face to be moved in uv space ,unfold selected uvs, automatically space texture space distribution, snap selected uvs, align selected uvs minimum u value ,align selected uvs maximum u value, align selected uvs maximum v value, align selected uvs minimum v value ,toggle isolate selected mode ,removal all uvs from selected objects,display image on/off, dim on/off ,toggle shaded uv display ,magnitude ,view grid on/off

Total: 45 Hrs

TEXT BOOKS:

1. David franson, “The dark side of game texturing”, primer press, 2014.
2. Badges, “Texturing”, stackpole books, 2003.

REFERENCE BOOKS:

1. David s.ebert, ”Texturing and modeling” ,edition iii, morgan kaufman, oct 1 , 2011.
2. Owen Demers , “Digital texturing and painting”, new riders, 2002.
3. Sue spargo, “Creative texturing” spiral bound, 2014.

Course objective: To provide the techniques and understand the various methods in visual effects. Develop skills and techniques to create special effects and to know the interface used in creating visual effects. And to know the physical properties of environmental fields to apply in the effects.

Course Outcome

At the end of the course, learners will be able to:

CO1: introduction to paint effects, coloring, designing weather backgrounds, liquid effects and glass effects which helps in creating good visual effects.

CO2: introduction to dynamics and explaining how it uses the rule of physics to simulate natural forces, overview of particles such as dots, streaks, spheres, blobby surfaces and other item, the process of animating using different types of field, instances, explosions. Hardware and software rendering process is done which can be composited with different live backgrounds.

CO3: understanding the behavior of soft body and rigid body, Rigid body Constraints of like nail, pin, hinge, barrier and spring. These techniques are done using different tool or software, students come to know the working of rigid body attributes and constraints.

CO4: different simulation techniques and creating water effects and rain effects, fluid simulation for special effects, designing fog effects these effects are done for real time live footage and attached to the background scene to give a realistic feel on screen. students understand what is simulation and designing through this.

CO5: special effects, camera tricks, hair and fur simulation to be attached to different body parts is being done which helps in learning their movements according to character or creature created by various tools, students are able to create there effects easily.

CO6 thus these techniques helps students in knowing more about visual effects done for industrial standards.

UNIT I PAINT EFFECTS

13

Introduction to visor, Designing Paint Effects, Coloring paints, Designing Trees and green effects, Designing Weather and seasons, Effects on seasons, Designing Glass image, Designing Different glass reflection, Designing Glow Effects, Liquid Effects and reflection design

Course objective: Digital Intermediate (DI) is one of today's most exciting and fastest growing technologies in digital post production of motion picture films.

Course Outcome

At the end of the course, learners will be able to:

CO1:Understanding the various types of projection and its technology used in theatres

CO2:Students explore how the Primary and Secondary color correction affects the whole image intensities of film

CO3:Explore the color of Bit Depth with Look Up Table (LUT).

CO4: Explore other techniques like rotoscoping and keying methods to enhance the color grading in films.

CO5:Understanding the complete methodology of post-production and color grading process.

UNIT I TELECINE COLORING WORKS 10

In this unit we teach about Cathode, a ray tube (CRT) system, an electron beam is projected at a phosphor coated envelope, producing a spot of light the size of a single pixel.

UNIT II PRIMARY AND SECONDARY COLOR CORRECTIONS 15

In this unit, Students explore how the Primary and Secondary color correction affects the whole image intensities of RGB and highlights of the entire frame, with these we teach the advanced techniques of color correction and well established digital painting techniques in the era of digital cinematography.

UNIT III MASK, MATTE, TRACK 15

In this unit, students will learn the evolution of digital color correction tools with advanced techniques of using point shapes to isolate color adjustment in the specific area of the image. We also teach color keying to isolate the colors in the image. We teach special training for automation on tracking the image in terms of color to save time in the production process.

UNIT IV DI - PROCESS 15

In this unit, students will explore the color of Bit Depth with Look Up Table (LUT). We teach about the Color grading is the process of altering and enhancing the color of a motion picture, video image, or still images either electronically, photo,chemically or digitally.

UNIT V PRESERVING THE QUALITY OF THE IMAGE

5

In spite of all, after this program students will gain knowledge about the DI importance and the scope of work.

Total: 60 Hrs

TEXT BOOKS:

1. Steve Hullfish, "The Art and Technique of Digital Color Correction", Focal Press, Second Edition, 2012
2. Sarah Cunningham, "New Cutting Edge Digital Intermediate", Pearson Longman, First Edition, 2007.

REFERENCE BOOKS:

1. Jack James; "Digital Intermediates for Film and Video", Focal Press, 2005
2. Alexis Van Hurkman; "Color Correction", Peachpit Press; First Edition, 2013

Course objective: To improve comprehension and vocabulary of students in communicative English.

1. Reading Comprehension and Vocabulary

Filling in the blanks – Cloze exercises – Vocabulary building- Reading and answering questions

2. Listening and answering questions

Listening and writing – listening and sequencing sentences – filling in the blanks – Listening and answering questions

3. Group Discussion

(Why GD part of a selection process – structure of a GD - Strategies in GD – Team work – body language)

4. Conversations

(Face to face Conversations & Telephone Conversations)

5. Self-Introduction and Role Play

REFERENCE BOOKS:

1. Robert Heller, , Communicate Clearly – Dorling Kindersley Ltd., London 1998.
2. Matthukutty M. Monippally, Business Communication Strategies, Tata Mc Graw h\Hill, 2001.
3. T.M. Farhatullah, Communication Skills for Technical Students, Orient Longman, 2002
4. 2004, Write to the top – Writing for Corporate Success; Deborah Dumame; Random House
5. Jayashree Balan, Spoken English, Vijay Nicole Imprints , 2005.

Course objective: To improve students' presentation and writing skills in communicative English.

1. Presentation skills
2. Soft Skills (Time Management, Stress Management and Body Language)
3. Resume/Report/Letter Writing
4. 30 Frequently asked Questions
5. Interview Skills

REFERENCE BOOKS:

1. Robert Heller, Communicate Clearly – Dorling Kindersley Ltd., London 1998.
2. Matthukutty M. Monippally, Business Communication Strategies, Tata Mc Graw h\Hill, 2001.
3. T.M. Farhatullah, Communication Skills for Technical Students, Orient Longman, 2002
4. 2004, Write to the top – Writing for Corporate Success; Deborah Dumame; Random House
5. Jayashree Balan, Spoken English, Vijay Nicole Imprints , 2005.

Syllabus
Generic Elective Courses

Course objective: On successful completion of the course the students should have:

1. Learnt to analyze the business model of firm, and determine the role that the internet(and related technologies) can play to support or even enable this model
2. Understand the key issues involved in managing electronic commerce initiatives
3. Utilize the internet to collect information to conduct research.

UNIT I TELECOMMUNICATION NETWORKS 15

Introduction- LAN-WAN- internet- what is electronic commerce- brief history of electronic commerce- advantages and limitations of electronic commerce- types of electronic commerce- integrating electronic commerce key questions for management.

UNIT II THE INTERNET AND THE WORLD WIDE WEB 15

The internet today- history of the web- unique benefits of the internet- internet architecture – world wide web concepts and technology- creating web pages- launching a business on the internet.

UNIT III ELECTRONIC PAYMENT SYSTEMS 15

Overview of the electronic payment technology- requirements for internet based payments – electronic payment medias- electronic commerce and banking.

UNIT IV E-SECURITY 15

Security in cyberspace- designing for security- virus- security protection and recovery encryption- the basin algorithm system- authentication and trust- key management internet security protocols and standard- other encryption issues.

UNIT V WEB BASED BUSINESS 15

Business-to-business electronic commerce- intranets and extranets- intranets and supply chain management- legal and ethical issues- case studies.

Total: 75 Hrs

TEXT BOOK:

1. Elias.m. Awad, "Electronic Commerce" prentice- hall of India Pvt Ltd, 2002.

REFERENCE BOOK:

1. Ravi kalakota, andrew b. Whinston, "Electronic Commerce – a managers guid", addison-wesley, 2000.

Course objective:

- To make the student understand the overall view of the internet.
- To inculcate the students about the various facilities available on the internet.
- To gain practical knowledge about the internet.

UNIT I INTRODUCTION 15

Internet and its history, defining and describing the Internet, Brief history, discussing the future of the Internet, Internet Resources. Describe the important features of the Web and Web browser software, Evaluate e-mail software and Web-based email services

UNIT II EMAIL 15

Email , Parts of email ,Email software , Web based email , Email address , List servers , Newsgroups ,Newsgroups names , Newsgroups readers ,Chat rooms , Conferencing .

UNIT III INTERNET RESOURCES 15

Internet Resources, Games, File transfer protocol, Telnet, World Wide Web, Behavior on the Internet , Accessing the Internet , Types of access , Online services , Internet services providers , How and where to look for the service Browsing the Web , Browsing the Web.

UNIT IV FTP 15

Use FTP and other services to transfer and store data, Demonstrate the use of real-time chat and briefly describe the history of the wireless Internet. Use mailing lists, newsgroups, and newsfeeds, Create HTML documents and enhance them with browser extensions

UNIT V APPLICATIONS 15

Applications of Internet- education, business, government, Communication , Job searches, Health and medicine, Travel, Entertainment, Shopping, Stock market updates, Research.

Total: 75 Hrs

TEXT BOOKS:

1. Rohit Khurana , “COMPUTER FUNDAMENTALS and INTERNET BASICS”, Aph Publishing Corporation,2010
2. Margaret Levine young, douglas Muder ,David C.Kay,Alison Barrows and Kathy warfel, “Internet” : The Complete Reference, 2nd Edition 1999.
3. Jasson Whittaker, “The Internet: The Basics”, Routledge, 2002.

REFERENCE BOOK:

1. Schneider and Evans,”New Perspectives on the Internet”, Comprehensive, Sixth Edition, 2007

Course objective:

- To know the common applications available for office work.
- To learn how to work in MS-OFFICE.
- To learn how to work in MS-EXCEL and POWERPOINT.

UNIT I MS WORD 15

Text Manipulations- font size, style, color. Alignment- left, right and justify, paragraph alignment, Usage of Numbering, Bullets, Footer and Headers, Usage of Spell check, and Find & Replace, Text Formatting, Picture insertion and alignment.

UNIT II MS WORD 15

Insertion – Table, chart, clip art, shapes, borders. Creation of documents, saving of documents, using templates, Creation templates, Mail Merge Concepts, Copying Text & Pictures from Excel.

UNIT III MS – EXCEL 15

Creating Excel sheet, Cell Editing, Usage of Formulae and Built-in Functions, File Manipulations, Data Sorting (both number and alphabets), Worksheet Preparation, Drawing Graphs, Usage of Auto Formatting.

UNIT IV POWER POINT 15

Start powerpoint , Create blank presentation , Selecting slide layout , Insert new slide , Editing presentation , Designing and formatting presentation , Change font, font color, size, style of text , Bullet and numbering, Slide design, layout, change background , preparing slide show presentation.

UNIT V POWER POINT 15

Inserting Clip arts and Pictures, Frame movements of the above, Insertion of new slides. Preparation of Organization Charts, Presentation using Wizards, Usage of design templates, working with tables, graphics and animation, working with graphs and organization charts.

Total: 75 Hrs**TEXT BOOK:**

- 1) Joyce Cox, Joan Lambert and Curtis Fryc, “Step by Step Microsoft Office Professional 2010”, Microsoft press,2011 edition.

Course objective:

- To make the student understand the special concepts in MS EXCEL.
- To practice the students how to work in lists, data forms and records.
- To understand the concepts of filtering data.

UNIT I ADVANCED EXCEL FORMULAS 15

Uses of Advance Excel Formulas -VLOOKUP, HLOOKUP, SUMIF, SUMIFS, SUMPRODUCT, DSUM, COUNTIF, COUNTIFS, IF, IFERROR, ISERROR, ISNA, ISNUMBER, ISNONTTEXT, OR, AND, SEARCH, INDEX, MATCH etc

UNIT II IF CONDITIONS 15

Various Methods and Uses of IF Conditions, When should use the "IF " Conditions? , Creation of Multiple IF Conditions in One Cell, Use the IF Conditions with the Other Advanced Functions , How to use nested IF statements in Excel with AND, OR Functions. Sorting, Data Forms, Adding Data Using the Data Form, Finding Records Using Criteria

UNIT III FILTERING AND SORTING 15

Filtering Data, AutoFilter, Totals and Subtotals Total, Row, Various Methods of Filter and Advanced Filter options, Creating and Updating Subtotals, Various Methods of Sorting Data, Creating, Formatting and Modifying Chart.

UNIT IV DATA VALIDATION AND GOAL SEEK 15

Uses of Goal Seek and Scenarios Manager , Data Validation, Creating drop down lists ,using different data sources , Linking Workbooks and Uses of Edit Link options ,Excel Options, Customizing the Quick Access ToolBar , Managing Windows, Multiple Windows , Splitting Windows.

UNIT V PIVOT TABLES 15

Various Methods and Options of Pivot Table, Using the Pivot Table Wizard, Changing the Pivot Table Layout, Subtotal and Grand total Options, Formatting, and Grouping items Inserting calculated fields, Pivot Table Options, Display and hide data in fields Select, Move & Clear Pivot data, Creating and Modifying a PivotChart

Total: 75 Hrs

TEXT BOOK:

1. Jordan Goldmeler, “Advanced Excel Essentials”, A Press, 2015 edition.

Course objective: To understand its constituents, forms and types, purpose of tourism and travel motivators and tourism infrastructure. Types and functions of travel agents and tour operators, tourism organizations, international and national. Tourism regulation and impacts of tourism, economics, socio cultural, environmental and political impacts.

UNIT I INTRODUCTION TO TRAVEL AND TOURISM 10

Tourism- meaning and definition, Significance of tourism, Tourism Industry-constituents, five 'A' of tourism, forms and types, purpose of tourism and travel motivators Definition-Accommodation, food and beverage, Attractions, Telecommunications, Essential services, Transport –air-road-rail-water, air transport in India, Security of aircraft and passengers, International Air Travel Classes, Transport as a attraction

UNIT II THE TRAVEL AGENTS, TOUR OPERATORS AND TOURIST ORGANIZATIONS 10

The Travel Agent, Travel Agencies-Types-Functions-source of income, setting -up a Travel Agency. The Tour operator-Types, Package Tours-Types Guides and Escorts Tourist Organization-Need for Tourism Organizations, International Organization, Government Organizations in India, Private Organizations, Non-Governmental Organizations

UNIT III TOURISM-REGULATIONS AND IMPACT OF TOURISM 10

Passport, VISA, Health Regulations for International Travel, Special Permits for Restricted Areas Customs Regulations, Emigrations and Immigrations, Taxes Paid by Travellers, Travel Insurances. Economic Impacts, the Multiplier Effect, Environmental Impact, Socio-cultural Impact, Demonstration Effect, Political Impact of tourism.

Total: 30 Hrs

REFERENCE BOOKS:

1. Tourism operations and management-oxford higher education-sunetra roday, archana biwal, vandana joshi
2. Tourism management - stephen page - el sevier