



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

School of Mass Communication

Department of Visual Communication

M.Sc. Animation

Programme Outcomes for School of Mass Communication:

The Mass Communication Programme prepares students to be able to do the following:

- 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.

Programme Specific Outcomes (PSO) for M.Sc. Animation:

Program Specific Outcomes (PSO)

Students who graduate with a Master of Animation will:

- **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.

School of Mass Communication

M.Sc. Animation

Board of Studies Members

Sl. No.	Name & Address	Designation
1	Mr. R. Raghuram, Head, School of Mass Communication. VELS University.	Chairperson
2	Mr.M.Thulasi Bharathy, Asst. Professor, School of Mass Communication. VELS University	Internal Member
3.	Mr.A.Kalimuthu, Asst. Professor, School of Mass Communication. VELS University	Internal Member
4.	Ms.Malini, Director, Loyola-KAUSHAL Kendra, Loyola College, Nungambakkam Chennai.600034	External Member (Academics)
5.	Mr.Raghunath, CEO,Pencils Rock, No.11,2 nd street,Balaji nagar,kelkatalai, Chennai=117	External Member (Industry)
6.	Mr. R.Siddharth Mohan Production Executive, Future Works, A-302 Purva jade Apartment,170 Arcot road Valasaravakkam Chennai-600087	Alumni



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NAAC ACCREDITED

PALLAVARAM - CHENNAI - INDIA

M.Sc. Animation

Curriculum and Syllabus

(Based on Choice Based Credit System)

Effective from the Academic year

2015-2016

Department of Visual Communication
School of Mass Communication

M.Sc. Animation

Curriculum

Total number of credits: 80

Semester: I

Category	Code	Course	Hours/week			Credits
			Lecture	Tutorial	Practical	
Core	15MAN001	Animation Concepts	2	2	0	4
Core	15MAN002	Media Studies	4	0	0	4
Core	15MAN003	Drawing & Digital Art	0	0	4	2
Core	15MAN004	2D Digital Animation	0	0	4	2
Core	15MAN005	Advanced Graphic Design	0	0	4	2
DSE	---	Discipline Specific Elective - I	0	0	4	2
DSE	---	Discipline Specific Elective - II	1	0	2	2
DSE	---	Discipline Specific Elective - III	1	0	2	2
		Total	8	2	20	20

Semester: II

Category	Code	Course	Hours/week			Credits
			Lecture	Tutorial	Practical	
Core	15MAN006	Cinematography Techniques	2	2	0	4
Core	15MAN007	Interface of 3D Software	0	0	4	2
Core	15MAN008	Web Design and Development	0	0	4	2
Core	15MAN009	Concept Art	0	0	4	2
Core	15MAN010	Audio and Video Editing	0	0	3	2
DSE	----	Discipline Specific Elective - IV	1	0	2	2
DSE	----	Discipline Specific Elective - V	1	0	2	2
DSE	----	Discipline Specific Elective - VI	1	0	2	2
GE	----	Generic Elective – I	2	0	0	2
		Total	7	2	21	20

Semester: III

Category	Code	Course	Hours/week			Credits
			Lecture	Tutorial	Practical	
Core	15MAN011	Film Direction Fundamentals	5	0	0	4
Core	15MAN012	Animation Production Management	5	0	0	4
Core	15MAN013	Dynamics & Visual effects	0	0	4	2
Core	15MAN014	Advanced Lighting & Rendering	0	0	4	2
Core	15MAN015	Advanced Rigging & Animation	0	0	4	2
DSE	---	Discipline Specific Elective -VII	1	0	2	2
DSE	---	Discipline Specific Elective – VIII	1	0	2	2
GE	---	Generic Elective – II	2	0	0	2
		Total	14	0	16	20

Semester: IV

Category	Code	Course	Hours/week			Credits
			Lecture	Tutorial	Practical	
Core	15MAN016	Media Research	2	2	0	4
Core	15MAN017	PROJECT A: Show Reel – 2D	0	0	12	6
Core	15MAN018	PROJECT B: Show Reel – 3D	0	0	12	6
Core	15MAN019	Media Internship	0	0	0	2
GE	---	Generic Elective – III	2	0	0	2
		Total	4	2	24	20

List of Discipline Specific Elective Courses:

S. No.	Code	Course
1.	15MAN101	Animation art Direction
2.	15MAN102	Art of Story Boarding
3.	15MAN103	2D Filmmaking
4.	15MAN104	Match Moving
5.	15MAN105	Compositing
6.	15MAN106	Dynamics II
7.	15MAN107	UV Layouts & Texturing
8.	15MAN108	Visual Effects
9.	15MAN109	Color Grading
10.	15SPGE11	Communicative English
11.	15SPGE21	Communicative English II

List of Generic Elective Courses:

S.No.	Code	Course
1.	15BCF154	E-Commerce
2.	15BCA156	Internet Basics
3.	15BCA153	Office Automation tools
4.	15BCA155	Advanced Excel
5.	15BHM153	Tourism Management

Syllabus

Core Courses

15MAN001

ANIMATION CONCEPTS

2 2 0 4

Course objective: The objective is to determine the techniques of traditional animation and expressions, students learn the process of drawing, shapes, shading and perspectives. The concept of drawings are delivered in digital format by accessing various tools for different characterizations

Course Outcome

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

CO1: Understanding the technique of traditional hand drawing methods and how to create animation using basic shapes and sketching methods.

CO2: It helps knowing about script writing for animation and storyboarding techniques, usage of traditional animation techniques and how the process is being done by using various tool , keyframe animation and key poses for developing a smooth animation, basic walk cycle technique and facial expressions helps to create good animation for further projects

CO3: Usage of tools for Digital Painting and vector drawings, How to develop a character and background creation, Usage of timeline and its purpose helps students to produce traditional animation.

CO4: Storytelling techniques, Concept Design and Development, the preproduction process helps in developing a good animation project, editing techniques for end product of post production and visualization.

CO5: Advanced techniques used for 2d production and post production techniques , animation scene planning digital animation and compositing process with effects is being performed that helps students to perform good digital animated outputs.

UNIT I DRAWING TECHNIQUES

12

Basic Drawing Concepts of Visualization Illustration and Sketching Basic Shapes and Sketching Techniques

UNIT II SCRIPT WRITING AND CHARACTER ENHANCEMENT

12

Basic Script and Story Board, Concepts of 2D, Cel Animation, Character Design and Development, Traditional animation, key frame animation, key poses and time stretch, character design development, facial expressions and walk cycles.

UNIT III ANIMATION TOOLS PROCESSING 12
Scripting & Storyboarding with Toon Boom Pro, Animation Process Development, Usage of tools for Digital Painting and vector drawings, How to develop a character and background creation, Usage of timeline and its purpose.

UNIT IV PRINCIPLES, STORYTELLING & EDITING 12
Animation Concept Acting and Direction for Animation Timing for Animation Storytelling Techniques Script Writing Concept Design and Development Storyboarding and Animation, Audio and Video Streaming and Editing, Previsualization

UNIT V ADVANCED TECHNIQUES OF PRODUCTION, DIGITAL ANIMATION 12
Advanced 2D Production and Post Production, Digital Animation Scene Planning, Digital Animation Ink and Paint, and Digital Animation Compositing and Effects

Total: 60 Hrs

TEXT BOOKS:

1. Edoux, Trish, Ranney, “Complete Anime Guide: Japanese Animation Film Directory and Resource Guide”, ‘Tiger Mountain Press, 1997.
2. Kevin Hedgpeth (Author), Stephen Missal, “Exploring Drawing for Animation ,Design Concepts,1st Edition, march 15, 2004.

REFERENCE BOOKS:

1. Bob Godfrey and Anna Jackson, “The Do,It,Yourself Film Animation Book”, BBC Publications, Edition I, 1974.
2. Thomas, Frank and Johnston, Ollie “Disney Animation: The Illusion of Life”,Abbeville Publications, 1981.

15MAN002

MEDIA STUDIES

4 0 0 4

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, Story Telling 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, "Hand Book of Journalism", Mohit Publications, 2002.
3. Barun Roy, "Modern Student Journalism", Pointer Publishers, 2004.

Course objective: Storyboard is a basic drawing and pre production course aimed at students which includes Motion Graphics and 2D Animation. This course teaches story based concept skills and techniques as well as basic animatic production. Students can also apply skills learned in this class in other areas including 3D animation and interaction design, produce a series of cohesive storyboards from a script, recognize and define common storyboard terminology.

Course Outcome:

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

CO1: Have a very good knowledge of basics of drawing and material handling and understanding.

CO2: Understand the inner form of human anatomy to get knowledge for illustration

CO3: Gaining the different movement of human and its line of action.

CO4: Gaining the composing knowledge of landscape and cityscape drawing and painting

CO5: Create own character design and concept for animation

UNIT I BASICS OF DRAWING 20

Drawing basics, material handling and understanding, teaching variety of lines, vertical, horizontal, diagonal, curved lines, dotted lines, and basic shapes, forms, geometrical shapes and non geometrical shapes, drawing balance, paper balance, freehand drawings, creating image using combinations of different lines,

UNIT II SKELETON STUDY 10

Understanding skeleton forms, head, rib bone, pelvic bone, hand and fingers, legs, Three views of the head and the skull, The study of different views of skeleton, movement of bones, front, back, side views of skeleton.

UNIT III MEASUREMENT OF ANATOMY 10

Measurement of anatomy, male and female, head calculation measurement, eye calculation measurement, different of male anatomy measurement and female measurement, comparing male and female face measurement horizontal and vertical balance of anatomy

UNIT IV INTRODUCTION TO PERSPECTIVE 10

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, One point perspective, Two point perspective, Three point perspective ,bird's view, worm's view.

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.

15MAN004

2D DIGITAL ANIMATION

0 0 4 2

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 between) 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, student will explore how 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, Student 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 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 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 tools combination.

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 Edition 1982.

REFERENCE BOOKS:

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

15MAN006

CINEMATOGRAPHY TECHNIQUES

2 2 0 4

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 CAMERA ANGLES

14

This unit relevant to Camera Angle, understanding Dramatic and Extreme Angle Low, High, Extreme Low, Extreme High, Bird's Eye, Reverse Angle, point of view variation of the POV technique, Voyeur, Reflection, Shadow, Silhouette.

UNIT II CONTINUITY

16

This unit describes Continuity with continuous, smooth, logical flow of visual images, supplemented by sound, depicting the filmed event in a coherent picture. Time continuity, Space Continuity,

Directional Continuity, 180, degree rule, Neutral Screen Direction, Camera Tracking, Entrance and exits, leading Looks and Static Screen Direction.

UNIT III CUTTING **10**

This unit describe about Cutting, Cutting is how shots are organized in sequence, to create a series of shots that flow naturally into each other. Cutting techniques, Jump cutting and smooth cuttings, cross, cutting.

UNIT IV CLOSE UP **10**

This unit describe the Close , up, Shot framing, Understanding the shot unique to film, Shot placing, detailing and Establishing, Close ups hide or reveal information.

UNIT V COMPOSITION **10**

This unit based Composition, Line Angles, Horizontal & vertical lines, Rule of Thirds , Aligning a subject with these points creates more tension, Framing ,Extreme Long , Medium Long , Long (LS), Wide, Knee , Medium (MS).

Total: 60 Hrs

TEXT BOOKS:

1. Joseph V. Mascelli , “The Five C's of Cinematography: Motion Picture Filming Techniques” , Silman,James Press, 1998.
2. CJ Rajkumar, “Pixel D A Complete Digital Cinematography”, Discovery Book, 2014.

REFERENCE BOOKS:

1. David Stump “Digital Cinematography: Fundamentals, Tools, Techniques, and Workflow”, Focal Press, 2014.
2. Christopher Ken worthy , “Master Shots: 100 Advanced Camera Techniques to Get an Expensive Look on Your Low, Budget Movie”, 2012.

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: Understand the 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 Bipeds 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

15MAN008**WEB DESIGN AND DEVELOPMENT****0 0 4 2**

Course Objective: The objective is to learn the techniques of website creation through tools and utilize them. Students will know the process of using the tools for various digital outputs like website layout creation, static and dynamic web page, using scripts for delivering small animations and attractive web pages , web hosting through server and creating their own web pages.

Course Outcome

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

CO1: Understanding webpage designing, slicing and exporting

CO2: Gain knowledge about scripting language like HTML

CO3: Gain knowledge about style sheath (CSS)

CO4: Understand software used for web designing

REFERENCE BOOKS:

1. S. E. Cupp, Rupa ,“Losing Our Religion: The Liberal Media's Attack”, Release, Edition I, 2001
2. Arpita Menon “Media Planning and Buying – Principles and Practice in the Indian Context”, MacMillan India Public Limited, First Edition, 2007
3. Molly E. Holzschlag, "Spring Into HTML and CSS" [Emeritus]Publisher: Addison,Wesley Professional

15MAN009

CONCEPT ART

0 0 4 2

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

15

The study of different views of skeleton, movement of bones, front, back, side views of skeleton. Comparing muscle of male and female anatomy basic different 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 animals and birds anatomy.

UNIT II CREATURE DESIGN

15

Creating original fantasy creatures. Writing backstories and narratives for creatures. Creating and develop 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 10

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 10

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 STORY BOARD 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.

Total: 60 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

15MAN010 AUDIO & VIDEO EDITING 0 0 3 2

Course objective: This course is intended to give students an introduction to various aspects of audio and video post ,production tools and techniques in video and audio editing, Introduction to Audio video editing systems and concepts, Familiarity of Non Linear Edit Systems, multi track recording systems and file formats. Digitization, Transcoding, Browsing and planning Sequencing in time line for Edit , change in image size and camera angle ,adding transition & Effects preparing Titles and sub titles, adding music, effects / dialogues , voice narrations with audio Mixing Techniques and taking Final video out.

Course Outcome

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

CO1: Having a good knowledge of NLE Editing systems (Adobe premiere & FCP) and various file formats and Different Editing concepts and tools used to create audio video media

CO2: Gain knowledge to Create or compile story sequence & story Board with its NLE, Adding & Deleting, Moving Edits, and Cut, Copy, and Paste. Constructing physical continuity.

CO3: Types and concepts in Editing , Pacing , timing , Rhythm & Tempo, sense of screen direction match Frame, cut away, Split Edits, lucid continuity, smooth cut, Montage making, Transitions Effects.

CO4: Understand the sound design, Audio sweetening , Background music, Voice dubbing Bridging the dialogue, Intro to audio mixing, Re-recording and Mixing Tools and power of sound in Video to Camera movement and Visual Audio Techniques

CO5: Have a thorough knowledge arranging the visuals, Pleasing color, Visual Continuity Effects & Dissolves, wipes, Emotional significance in Visual interest, realistic dialogue. Basic Encoding the Video Source to final Delivery for Screening

UNIT I UNDERSTANDING OF FILM AND VIDEO EDITING 9

Study of different kinds of NLE Editing systems AVID & FCP and file formats, SD & HD Video Formats and study of the using of Editing equipments, cue sheet & Video cutlist reports, Understanding Interfaces , Saving project Setting scratch Disc and Loading Bin ,Working with different formats and Studying of Editing tools and accessories , Importing Video and Audio sample rates, frame rates ,DV/HDV/HD formats. Understanding inserts – overwrite, marking In and Out, Non, Linear Techniques Adding & Deleting, Moving Edits in time line – Cut, Copy, and Paste.

UNIT II PRINCIPLES OF FILM AND VIDEO EDITING 9

Working with Bins Organizing your footage's ,viewing clips of rush videos Separation of ok takes and deletion of NG takes Assembly of Rushes in story order & story Board , Basic systems in Video Editing , The shot, The Scene, Sequences , Study of Transitions , Study of optical effects , Study of video effects, Using of bridging shot , Cut away and cutting in action – smooth cut ,Cutting on movement , Inter cutting, Parallel cutting and constructive editing, Montage ,Creative editing, Real time and Artificial time, rhythm, pace, space, Creative editing. Basic Transitions, visual Effects and Optical effects, Understanding Editing modes in off and on line.

UNIT III EDITING SPECIALIZATION EXERCISE 9

Editing Decision ,Editing Functions , Combination of timing , Pacing , Rhythm & Tempo, time code Editing Split Edits Drag & Drop Editing ,smooth cut, constructing a lucid continuity , constructing physical continuity , Slow and fast motion actions, change in image size and camera angle, sense of screen direction, , Editors cut, match cut, movement and look, The cut away ,The reverse shot, imaginary compositions, Exciting images, Cumulative effect, Direct contrast and matching Tone. Montage making, Extending & Reducing Clips Rendering setting Effects Applying, Bridging the action.

UNIT IV BASIC AUDIO TOOLS FOR VIDEO EDITING 9

Actual Sound, continuous sound track , Relational Editing , Dialogue counterparts , Editing Dialogue sequence , Natural Rhythm, Adding ambience sound, Effects, Bridging the dialogue , Controlling the volume between the channels ,True and natural presentation Intro to audio

mixing, sweetening, and sound design ,Study of Background music, Voice dubbing, Effects dubbing, synchronous and non synchronous sounds, using special sounds effect, Re-recording and Mixing and power of sound, sound as a counter point, mechanism of sound in editing of films creating the mixed track, according to Camera movement and Visual Audio Techniques.

UNIT V COLOUR CORRECTION AND FINAL DELIVERY 9

Harsh cut – jerky cut – Cause and effect – Smooth Continuity – Sound edit – Dramatic cure punctuation and Amplification, Song Editing, Specific goals, Transition & Sound. Action sequences , Physical conflict, Timing, rate of cutting, problems in editing action sequence, Russian montage, French montage and American montage – Montage as a Transitional device Emotional significance Arranging the visuals slow and fast – Pleasing Visual Continuity – Dissolves, wipes, realistic dialogue.

Total: 45 Hrs

TEXT BOOKS:

1. John M. Woram “Recording Studio Handbook” Sagamore Pub. Co; 1st edition (1976)
2. Ken. C. Pohlmann, “Principles of Digital Audio “Tab Electronics; 6 edition 2010
3. Ken Dancyger, “The Technique of Film and Video Editing”, Taylor & Francis, 2007

REFERENCE BOOKS:

1. David Miles Huber, Robert E. Runstein “Modern Recording Techniques”,Focal Press; 7 edition 2009
2. Karel Reisz,Gavin Millar “The Technique of Film Editing” Focal Press; 2nd edition .2009
3. Joseph V. Mascelli “The Five C’s Cinematography” Silman,James Press,1998
4. Glyn Salkin, “Sound recording and Reproduction” Oxford focal press, 1996

15MAN011

FILM DIRECTION FUNDAMENTALS

5 0 0 4

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 CONCEPTS OF DIRECTION 12

Basic concept of direction, visual aesthetics, visual language, visualization methods, Direction crew and their responsibilities, the basic concept of narrative and non narrative visual communication. Knowledge and understanding of the vocabulary, codes and concepts inherent to the discourses of visual reproduction.

UNIT II BLOCKING THE SCENE 12

Film making: visualization. The axis of action. Representing visual space. Composition, continuity, figurative of narration, story board. Film making: practical cases. Camera shots and movements, sequences. Use of mechanical movement. Introduction to fictional screenplay writing and the concept of audio video narrative.

UNIT III DEVELOPMENT OF A FILMMAKING PROJECT 12

Knowledge and application of technique and procedure in film making. Method and development of a film making project. Analysis of the written contribution of film making to the thinking on the expressive qualities of cinema.

UNIT IV FLOOR PLAN AND CREATIVE TECHNIQUES 12

Creative responses to set topics based on analysis and relating ideas. Learning the main concepts of expressions and technique in cinema and full scope of their expressive possibilities, Different kinds of floor plan.

UNIT V MAKING OF DIFFERENT TYPES OF FILMS 12

It deals with 45 minutes fiction Film, Advertising Commercial film production, Documentary film production and Film production management.

Total: 60 Hrs

TEXT BOOKS:

1. Michael Rabiger, “Directing: Film Techniques and Aesthetics”, Butterworth, Heinemann: Focal Press, 1989.
2. Steven Douglas, Film directing shot by shot visualizing from concept to screen, Michael Wiese productions, 1991.

REFERENCE BOOK:

1. Bruce Mamer, Film production techniques: Creating the accomplished image

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 project. 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 visual communication

CO2: Providing the opportunity on initiating the production with help 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 13

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 11

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 12

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

UNIT IV MONITORING AND CONTROLLING 12

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

UNIT V CLOSING 12

This topic gives idea of reporting, Scope verification, signoffs and Archiving that has to follow in animation production.

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.

15MAN013

DYNAMICS AND VISUAL EFFECTS

0 0 3 2

Course objective: Learning the techniques and understand the various methods, 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 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 particle. Animating the particle using 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 particle 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.

15MAN014 ADVANCED LIGHTING AND RENDERING 0042

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 basic of Color and composition. 3d Lighting, Omni, spot light, direct light.

UNIT II KNOWING THE 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 jumping 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 constrains 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, Wight lifting etc.). Four Leg Animation (walk, run, Jump) Lip sync Animation. Single Character Animation with Dialogues , Two or more character interacting animation with Dialogues. Work Flow 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

15MAN016**MEDIA RESEARCH****2 2 0 4**

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

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

1. 2D, Animation
 - ❖ Dynamic web page.
 - ❖ Corporate presentation
 - ❖ Small Game

OR

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

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: CONCEPT CONTENT FOR THE SHORT FILM OR CONTENT FOR WEB PAGE 36

Students are expected to create concept 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: SKETCHING AND STORY BOARD 36

The story line for the short film is sketched in the paper with shot and scene. Web page and corporate presentation outline are also sketched.

UNIT III: PIPE LINE FOR ANIMATION **36**

The Animation flow for the film is planned and executed on the system

UNIT IV: WORKING ON CHARACTER CREATION **36**

The character is created separated and animated. The background is created separately.

UNIT V: COMPILING ALL THE WORK. **36**

Compiling all the works together to give the Video out. Along with sound to give a final out.

Total: 180 Hrs

15MAN018 **PROJECT B: SHOW REEL 3 D** **0 0 12 6**

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 house or office.
 - ❖ 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 Rendered 3D to real time 2D video

UNIT I: CONCEPT FOR THE FILM AND CHARACTER MODELING 36

Students are expected to create concept 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: STORY BOARDING 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 photo shot 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

Syllabus

Discipline Specific Elective Courses

15MAN101 ANIMATION ART DIRECTION 0042

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 on 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 lay outs, concept and story developing idea, 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, Preproduction process, Basic of Storyboards, screenplay and picturing, shots and storyboard panels., script, one line order, types of story board technique, Thumbnail story boards, 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,

UNIT IV STORY BOARD FOR COMIC 10

Cartoon story boards, Color story board, black and white story board, fantasy story board, storyboard samples, graphic novel storyboard, staging figures, dialogue and captions, manga storyboards. comic,book,like story sketches,

UNIT V STORY BOARD FOR BOOKS

5

Introduction to book illustration story boards, front page story boards, picture book storyboard, scenes for chapters of the stories, story boards for poems, and advertising story board.

Total: 45 Hrs

TEXT BOOKS:

1. Wendy tumminello, “Exploring Storyboarding (Design Exploration Series)”, Delmar Cengage Learning, 1st Edition, 2004
2. John Hart, “The Art of the Storyboard A Filmmaker’s Introduction”, Focal Press; 2 edition 2013

REFERENCE BOOK:

Giuseppe Cristiano “ Storyboard Artist: A Guide to Freelancing in Film, TV, and Advertising” Michael Wiese Productions, 2012

15MAN103

2D FILM MAKING

0 0 3 2

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’s. Tools of 2D Animation

UNIT II STORY BOARDING AND VISUAL PLANNING 9
Animating Walk cycle, Breaking down a Character and Animating. Story Board Basics, Stop Motion Animation. Basic Multi planning and Scene planning. Visual Break Down and Lip sync

UNIT III STORY BOARDING FOR MAKING MOVIE CLIPS FOR WEB 9
Story Boarding 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 key frames , Representations of animation in the Timeline , Frame rates , Frame,by,frame animation , Onion skinning , Extend still images , Mask layers , Using Timeline effects , Twinned animation , Special effects , Filter , Animation Filters , Create preset filter libraries , Blend modes in Flash , Working with text , Working with sound , Working with video .

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 Composting and Effects

Total: 45 Hrs

TEXT BOOK:

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

REFERENCE BOOK:

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

15MAN104 MATCHMOVING 0032

Course objective: Learning the techniques and understand the various methods in match moving. 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 it helps students understand how 2d and 3d objects work in 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 a 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 there 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:Match moving 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 is same angles of the live footage. Basic application with matchmoving capabilities. Basics of tracking algorithm,basics of motion tracking algorithm.

UNIT II FUNDAMENTALS OF MATCHMOVING 9

Matchmoving is related with motion tracking or camera solving ,rotoscoping and photogrammetry template matching ,basics of 2D & 3D camera tracking, ground plane determination. Reconstruction. Tracking mattes. Study and making of live footage.

UNIT III CREATING TRACKING MARKERS 9

Hard body physics, Basic of Camera animation, Matte tracking, Body tracking, Face tracking, Ray tracing, Basic motion capture, Green matte painting, Basic of motion capturing. Basic features of placing tracking points based on the footage.

UNIT IV INTERFACE WITH MATCHMOVING 11

To discover 2D tracking and how to make every track count, Work step by step through each stage calibration. Understand how real camera work. Explore the match mover's role on a live action set. To learn the matchamation, match your CG character or object live, action plate . Learning of basic compositing.

UNIT V ADVANCED MATCHMOVING 9

Learning to track the motion of an object seen in the footage. Apply match move data for painting, compositing and lighting. Examine how 3D movies affect match moving. Learn how

3D/stereo movies are made and how it affects matchmovers , advanced matchmoving capabilities and algorithm

Total: 45 Hrs

TEXT BOOK:

1. Tim Dobbert, “Matchmaking: The Invisible art of Camera Tracking”, John Wiley & Sons, Second Edition, 2012

REFERENCE BOOK:

1. Erica Hornung, “The Art and Technique of Matchmoving: Solutions for the VFX Artist”, Taylor & Francis, 2013

15MAN105

COMPOSITING

0 0 3 2

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 rotoscoping 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 has 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 are done.

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

UNIT I ROTOSCOPY & KEYING 10

In this unit, Students explore the rotoscopy involves 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 teaches the fastest and most accurate way to extract an object. This method is used to perform specific operations like color correction, adding multiple layers, foreground and background compositing, dynamic effects etc.

UNIT II 2D& 3D TRACKING 10

In this unit, student will explore the tracking the footage. This concepts teaches the how to track the live footage in 2D and 3D, it also teaches the techniques involved in this process. This method teaches the student how to track the camera in 2D and 3D layers for compositing. We teaches origins of 3D tracking technologies lie in the science of photogrammetry, the scientific method of calculating positions and distances of points referenced in one or more images.

UNIT III LIVE ACTION COMPOSITING 10

In this unit, Students explore live action compositing techniques. Its covers how to composite various different layers into single image. In this session, students will learn at three general areas where CGI elements are composited. First up is straightforward CGI compositing where a CGI object has been created and needs to be composited into the scene. Second, we will take a look at set extension, a rapidly expanding technique in filmmaking. Thirds, 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

UNIT IV STEREOSCOPY PIPELINE AND ITS PROCESS 10

In this UNIT, Student will explore the pipeline of stereoscopy. In this session we cover the workflow of stereoscopy which follow the four major departments such as Rotoscopy, Matte Extraction, Clean plate and Stereo conversion process.

UNIT V RENDERING AND OUTPUT FORMATS 5

This is the stage where we teach about the bit depth of colors and various output formats with aspect ratio. In this session we teach how to put render for broad casting and filming (size differs).

Total: 45 Hrs

TEXT BOOKS:

1. Ron Ganbar, “Nuke 101: Professional Compositing and Visual Effects”, Peachpit Press; Second Edition, 2014
2. Steve Wright, “Compositing Visual Effects”, Focal Press; Second Edition, 2011

REFERENCE BOOKS:

1. Steve Wright “Digital Compositing for Film and Video”, Focal Press; Third Edition, 2010
2. Ron Brinkmann, “The Art and Science of Digital Compositing”, Morgan Kaufmann Publishers In; Second Revised Edition, 2008

15MAN106

DYNAMICS II

0032

Course objective: Learning the techniques and understand 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 constrain type, Convert rigid body animation to keys.

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, anisotrophy, ramp shader, surface shader, ocean shader ,hube shader, shading map, displacement, checker ,cloth, mountain ,ramp , fractal ,noise ,buldge .

UNIT III UV 9

Planner 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 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 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

UNIT II PARTICLES AND FIELDS

17

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 particle.

Animating the particle using 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 III SOFT BODIES AND RIGID BODIES 12

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, Change or turning off the constrain type, Convert rigid body animation to keys.

UNIT IV FLUID EFFECTS 18

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, Water effects with fluids, Fluid stimulation for special effects.

UNIT V SPECIAL EFFECTS 15

Designing Special Effects, Designing effects of Fur and shape, Designing Fur Effects, Designing Cloth & Clothes and effects, Fire effects, Lighting, Shatter, Curve flow, Surface flow, Basics of n dynamics and n cloth, Special effects rendering techniques.

Total: 75 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 Graphics (2nd Edition), 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.

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 rotoscopy 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,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, student will learn the evolution of digital color correction tools with advanced technique 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 term of color to save the time in the production process.

UNIT IV DI - PROCESS 15

In this unit, student 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

15SPGE11**COMMUNICATIVE ENGLISH****(Practical)**

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.

15SPGE21

COMMUNICATIVE ENGLISH II

(Practical)

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. Monipnally, 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

15BCF154

E- COMMERCE

5 0 0 4

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 the 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 understands the overall view of internet.
- To inculcate the students about the various facilities available in internet.
- To gain practical knowledge about 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 e-mail 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

15BCA153

OFFICE AUTOMATION TOOLS

5 0 0 4

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 MSWORD 15

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

UNIT II MSWORD 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 of 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 1V POWER POINT 15

Start power point , 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.

15BCA155 ADVANCED EXCEL 5 0 0 4

Course objective:

- To make the student understand the special concepts in MS EXCEL.
- To practice the students how to work in list, 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, ISNONTEXT, 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 Advance 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 Advance Filter options, Creating and Updating Subtotals, Various Method 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 Tool Bar , 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 Goldmeyer, “Advanced Excel Essentials”, A Press, 2015 edition.

15BHM153**TOURISM MANAGEMENT****2 0 0 2**

Course objective: To understand its constituents, forms and types, purpose of tourism and travel motivators and tourism infrastructure. Types and functions of travel agent 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 - steven page - el sevier