

BHARATHIAR UNIVERSITY: COIMBATORE-641 046**B.Sc., DIGITAL MEDIA**

(For the CPP students admitted during the academic year 2013-2014 & onwards)

SCHEME OF EXAMINATIONS - (CBCS Pattern)

Part	Course title	Inst hrs / week	Examination				Credit
			Dur	CIA	Mark	Total	
Year 1							
Semester 1							
I	Language – I	6	3	25	75	100	4
II	English – I	6	3	25	75	100	4
III	Core 1: Design Study	4	3	25	75	100	4
	Core 2: Visualisation I	4	3	25	75	100	4
	Core Lab 1: Design Study Lab	3	3	40	60	100	4
	Allied Paper 1: Visualisation I Lab	5	3	40	60	100	4
IV	Environmental Studies #	2	3	-	50	50	2
Semester 2							
I	Language – II	6	3	25	75	100	4
II	English – II	6	3	25	75	100	4
III	Core 3: Visual Communication Methods & Ethical Practice	5	3	25	75	100	4
	Core Lab 2: Visual Communication Methods & Ethical Practice	3	3	40	60	100	4
	Core Lab 3: Digital Illustration and Image Processing for specialist practice Lab	2	3	20	30	50	2
	Allied Paper 2: Evolution of Art, Design & Culture	6	3	25	75	100	4
IV	Value Education – Human Rights #	2	3	-	50	50	2
Year 2							
Semester 3							
III	Core 4: Design & Communication: Option I - Design & Communication for Animation/ Option II - Design & Communication for Visual Effects/ Option III - Design & Communication for Game Arts & Design	6	3	25	75	100	4
III	Core 5: Visualization II	6	3	25	75	100	4
III	Core Lab 4: Design & Communication Lab: Optional I – Design & Communication Lab for Animation/ Optional II – Design & Communication Lab for Visual Effects/ Optional III – Design & Communication Lab for Game Design	6	3	40	60	100	4

	Allied Paper 3: Communication & Media Production	6	3	25	75	100	4
IV	Skill based 1: Visualization II Lab	5	3	30	45	75	3
IV	Tamil@/Advanced Tamil# (OR) Non-major elective- I (Yoga for Human Excellence) # / Women's Rights#	2	3	50		50	2
Semester 4							
III	Core 6: Specialist Practice I: Option I - Modelling, Texturing & Lighting/ Option II - Compositing / Option III - Level Design	6	3	25	75	100	4
III	Core 7: Specialist Practice II: Option I - Rigging & Animation/ Option II - CG & Effects/ Option III - Game Art	6	3	25	75	100	4
III	Core Lab 5: Specialist Practice I: Option I - Modelling, Texturing & Lighting – Lab/ Option II - Compositing – Lab/ Option III - Level Design - Lab	6	3	40	60	100	4
III	Allied paper 4: Studio Practice I Lab: Option I - Rigging & Animation – Lab/ Option II - CG & Effects – Lab/ Option III - Game Art - Lab	6	3	40	60	100	4
IV	Skill based 2: Pre-production for Project & Dissertation proposal	4	3	30	45	75	3
IV	Tamil @ / Advanced Tamil # (or) Non-major elective-II : General Awareness #	2	3	50		50	2
Year 3							
Semester 5							
III	Core 8: Dissertation	6	3	25	75	100	4
III	Core Lab 6: Dissertation Lab:	6	3	40	60	100	4
	Core Lab 7: Studio Assimilation Lab	6	3	40	60	100	4
III	Core 9: Portfolio	6	3	25	75	100	4
III	Elective I:	6	3	25	75	100	4
IV	Skill based 3: Portfolio Authoring Lab	4	3	30	45	75	3
Semester 6							
III	Core 10: Professional Practice	6	3	25	75	100	4
	Core 11: Presentation Techniques	6	3	25	75	100	4
	Project Work	5	3	25	75	100	4
III	Elective II:	5	3	25	75	100	4
III	Elective III:	5	3	40	60	100	4
IV	Skill based 4: Internship	4	3	30	45	75	3
V	Extension Activities@	-	-	50	-	50	2
Total						3500	140

\$ Includes 25% / 40% continuous internal assessment marks for theory and practical papers respectively.

@ No University Examinations. Only Continuous Internal Assessment (CIA)

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List of electives:

Part	Course title	Inst hrs / week		Examination			Credit
Elective I	Visualization Technique for Animation & Visual Effects	6	3	25	75	100	4
	Visualization Technique for Game Design	6	3	25	75	100	4
Elective II	Project Management	5	3	25	75	100	4
	Multimedia and interactivity	5	3	25	75	100	4
Elective III	Audio technique for post lab	5	3	40	60	100	4
	Game testing lab	5	3	40	60	100	4

DESIGN STUDY

Unit-1

Design fundamental - Characteristics of a good design - visual composition – Elements of design – point , line , shape , form/space , value/tone , texture , colour – principles of design – balance , emphasis , dominance , harmony , unity , contrast , repetition , rhythm , proportion – creativity , importance of creativity , developing creativity.

Unit-2

Overview of digital media – communication: unmediated vs. mediated – Media: one –way (mass media) vs. interactive (new media) – computer hardware and software – film and video – audio and hardware – story telling , storytelling and interactivity – special topic- 2D and 3D – 3D applications.

Unit-3

Colour theory – introduction – basics of colour theory – attributes of colour – hue , value , saturation – colour wheel – colour harmony – colour schemes – achromatic , monochromatic , polychromatic , warm colours , cool colours , analogous colours , complementary colours , split compliments , incongruous , triads and tetrads – colour blending – additive model , subtractive model – colour contrast – colour psychology.

Unit-4

Typography – typeface anatomy , measurements – typeface classifications – type families – spacing and alignment – selecting appropriate fonts – tips and techniques – Graphics – importance of graphics – types of graphics – vector graphics , raster graphics – image manipulation – format conversion – crop and scale – silhouetting – colour manipulation – edge and transparency – assembling images – filtering – envelope/containers.

Unit-5

Grids and layouts – role of grids – structure – grid system and templates – layouts – layout guidelines – important parts of a page layout - factors influencing a layout – organizing layouts – capturing readers attention - design process – approach - stages of design process – demonstrations and guidelines.

References

- Led Well, William, “Universal Principles of Design”, Rock Fort Publisher, 2003
- Fraser, Tom, ”The Complete Guide to Colour. Ilex”, 2004
- Eisman, Leatrice, ” Pantone Guide to Communicating With Color”, Graftix Press, 2000
- Pipes, Alan, “Foundation of Art and Design”, Laurence King. 2008
- Conran, Terence, “Terence Conran On Design”, Conran Publication, 1996
- Recommended Reading
- Lipton, Ronnie, “Designing Across Cultures”, How Design Books, 2002
- Davis, Graham, “The Designer's Tool Kit 1000 Colours”, Chronicle Books, 2007
- Carter, David, E, “The Big Book of Design Ideas”, Collins Design, 2005

VISUALISATION I

Unit-1

Perspective views – types of perspective views – linear perspectives vs. aerial perspective – perspective terminology – horizon line/eye level , station point , picture plane , vanishing point – linear perspective construction methods - one point perspective , two point perspective , three point perspective.

Unit-2

Figure drawing basics – Essentials of human figure drawing – Proportion and Gesture - Simplifying body parts in to 2D shapes – Relative proportion of various parts of the body - Constructing the front view using basic shapes - stick figure – line of action – balance – contour drawing(different poses) – Cylindrical forms (front and side view) – foreshortening – overlapping – balance – quick sketches – study from live figure.

Unit-3

Introduction to RYB mode, hue, value, saturation – colour mixing - create a colour wheel – primary, secondary and tertiary colours - Greyscale - understanding colour combinations - colour contrast – colour psychology

Unit-4

Introduction to textures – Types of texture – Understanding the foreground, mid ground and background colour in textures – Useful tips on creating a texture - Creating texture using live reference.

Unit-5

Introduction to set model – Understanding scale and proportion - Study of different environment – Understanding different materials and their applications – Application of texture and colouring in relation to the relevant subject.

References

- Lidwell, William, “Universal Principles of Design”, Rockport Publisher,2003
- Fraser, Tom, “Complete Guide to Colour” ,Ilex Publisher,2004
- Felder, Eugene., & Elvin, Emmett,“Complete Book of Drawing Techniques”, Kandour Publisher, 2005
- Tomory, Edith, “History of Fine Arts in Indian and the West”, Orient Longman Publisher, 2004
- Chari, Aditya, “Figure Study Made Easy”, Grace Prakashan Publisher, 2005
- Gene, franks, “The art of pencil drawing”, Walter Foster Publisher, 2004
- Mulick, milind, “Perspective”. Jyotsna Prakashan Publisher, 2006

DESIGN STUDY - LAB

Students are required to draw the following:

- Create a Colour schemes, Colour perception and Colour psychology
- Create a typography in a layout
- Design a layout/package/ Interface
- Create a piece of work on social issue

VISUALISATION I - LAB

Students are required to draw the following:

- Draw any environment in one point perspective
- Draw any interior view in 2 point perspective
- Draw any alphabet in 3 point perspective
- Create a pigment colour wheel
- Create a texture
- Create a scaled set model

VISUAL COMMUNICATION METHODS & ETHICAL PRACTICE

Unit-1

Introduction To Communication – Communication Definition – Models of Communication (Aristotle, Harold Lasswell, SMCR, Shanon & Weaver, Schultz Von thun) – Seven C's of Effective communication - Classification of Communication (Intrapersonal, Inter personal, Group communication, Mass Communication) - Verbal, Non Verbal Communication – Visual Communication.

Unit-2

Mass Communication Media – Evolution of Mass communication – Types of Mass Media and their characteristics (Print, Electronic and New Media) – Functions of mass Communication – Mass communication Theories

Unit-3

Visual Communication Methods – Illustration, Graphic Design Photography, - Fundamental Principles and their application

Unit-4

Visual Communication Methods –Animation, Motion Picture, Documentary, Mixed media, Folk Art - Fundamental Principles and their application – Semiotics, Metaphor and Aesthetics

Unit-5

Ethics & Media – Ethics – Definitions – Ethical Thinking Framework- Media Regulatory Bodies and their guidelines in India – CBFC, PCI, BCCC, ASCI, NBA, PEGI, ESRB. – The Copyright Act - Media Ethics Case studies and discussions

References

- Keval J. Kumar, “Mass Communication in India”, Jaico Publishing House, 2011
- Joseph R Dominick, “Dynamics of Mass Communication”, 12 edition , McGraw-Hill Higher Education, 2012
- Irving Fang, “A history of Mass Communication Six Information Revolutions”, Focal Press, 1997

EVOLUTION OF ART, DESIGN & CULTURE

Unit-1

Development of Art & Design – Early civilization (Old Stone Age, Middle Stone Age, New Stone Age-Bronze Age (Indus Valley civilization, Mesopotamia, Anatolia, Europe , China, Africa, Ancient Egypt and Ancient Somalia)– Indian Art (Architecture, Sculpture and Painting)-Temple Architecture,-Persian Art and Architecture, Moghul and Rajasthani miniature, Madhubani, Kngra and Warli painting. Ajantha & Ellora Cave paintings

Unit-2

History of Art and Development of diverged Style- (Gothic-1200, Renaissance-1400,Baroque (Classicism)-1600, Rococo (Classicism)-1700,Neoclassicism-1750,Impressionism-1860, Expressionism-1905, Cubism-1908,Abstract-1910,Constructivism-1913,Dadaism-1916,Surrealism-1924,Optical art-1950, Pop Art 1958, Conceptual art (Minimalism)-1960, Digital Art-1978,New Media-1990.

Unit-3

Development of Design, Graphic Design and Culture--Design History Basics -Conceptual Art Minimalism(1960),Digital Art -Graphic Design -the global underpinnings of Renaissance material culture-the Japanese tea ceremony as a case of 'import substitution'-German design in the context of empire, -Indian cotton and European fashion 1400-1800, -the study of dress and textile, -ceramic history,-furniture history,-interior design,-graphic design, environmental design -Culture Definition (Sir E.B. Taylor 1832-1917)-Culture and Semiotics-Sign, Code and Text (Ferdinand de Saussure) -Structuralism (Althusser 1918-1990) -Cyborgs (Donna Haraway 1991) -Culture Industry, -Advertising, -Visual Culture.

Unit-4

Evolution of Design and Media:-The Invention and Early Years of The Cinema, 1880s-1904. - The International Expansion of The Cinema, 1905-1912.- National Cinemas, Hollywood Classicism, and World War-I (1913-1919) -The Late Silent Era, 1919-1929, -Major Post war Genres -The French Impressionist Movement, -The German Expressionist Movement -Soviet Cinema in the 1920s ,The Development of Sound Cinema 1926-1945, The Post War Era: 1945-1960 Art Cinema and The Idea of Authorship

Unit-5

VFX (Visual Effects) -Evolution of Visual Effects in Industry -Visualisation and Realisation through Visual Effects -Developments in Visual Effects through technology -Visual Effects in Virtual reality 3D Animation -Evolution of Animation -Style, Techniques & Types of Animation -Developments in Animation through technology -3D in Visual reality Game Art - Evolution of Game (Video game History, Edutainment, Role of Playing Games and history, Strategy Games and History), -Influence of Film on Game (Hollywood and the Video game Industry, Film-game and Media Convergence), -Game Culture and behaviour Ancient Games in India. Identity and community in Virtual world and Gamification.

References

- D Bordwell & K Thompson,” Film art: an introduction. Boston”, McGraw Hill. 2008
- Brown, “Videogames and education. Armonk”, N.Y., M.E. Sharpe, 2008
- Byrne Bill , “T H E VISUAL EFFECTS ARSENAL.VFX Solutions for the Independent Filmmaker”, Focal Press,N.Y.,London and Singapore ,2008
- S During , “The Cultural studies reader”, London, Routledge ,1993
- Pooke & Newall “Art history: the basics. New York”, Routledge , 2007

**DIGITAL ILLUSTRATION AND IMAGE PROCESSING FOR SPECIALIST
PRACTICE - LAB**

Students are required to draw the following:

- Restore a damaged photography digitally
- Convert a day light image to night
- Create a texture
- Create a logo
- Create a set model with texture & light

VISUAL COMMUNICATION METHODS & ETHICAL PRACTICE – LAB

- Design a name card for an exhibition
- Design an avatar to represent you
- Create a poster to promote the video/game
- Design a title for the video/game
- Create a video illustrating the pipe line of the project
- Create a video/game for an exhibition

DESIGN & COMMUNICATION FOR ANIMATION**Unit-1**

Introduction to storytelling – discussion on stories – Types of stories , traditional stories , personal experience stories , created stories – academic theories of story – ways of using visuals to tell story - discussion of convention story telling

Unit-2

Evolution of the director – Role of the director – Responsibilities – understanding the film – language – technician vs. artist - filmic space and filmic time – the basic units – shots, scene and sequences – The organic structure of screenplay, script, Idea, Theme – conflict

Unit-3

Storyboard – Animatics – medium and techniques – production - Lighting, Properties of Light – Factors that influence lighting needs – Lighting Practices – creating soft light – Lighting the close up – Handling reflective surfaces - Post Production – pitch – Presentation

Unit-4

Match Moving : Introduction to match moving and its process - 3D to 2D to 3D Process - Match moving in production pipeline - Matching Still image and photography methods - Real world camera and retrieving cam data techniques , Finding the actual Focal Length and setting it in Maya , Adding our image plane for initial camera match moving , Matching the first point of our building , Creating a basic camera rig to rotate around our point , Rotating our camera to match our rotation to our building

Unit-5

Introduction to dynamics: Overview of Particles - Particle object – Emitter - Particle collision - Rendering Particles - Connect and disconnect fields, emitters, and collision objects - Overview of fields (Air, Newton, Drag, Gravity, Turbulence, volume axis) - Effects(Fire, smoke, shatter) - Soft bodies - Rigid bodies - Rigid body constraints - Ncloth

Reference:

- Mary Murphy, “Beginner's Guide to Animation: Everything You Need to Know to Get Started”, Crown Publishing Group, 2008
- Eric Keller, “Maya Visual Effects: The Innovator's Guide”, John Wiley & Sons ,2007
- Todd Palamar, “Maya Studio Projects: Dynamics”, John Wiley & Sons ,2009
- Tim Dobbert, “Matchmoving: The Invisible Art of Camera Tracking”, Sybex ,2005

DESIGN & COMMUNICATION FOR VISUAL EFFECTS

Unit-1

Introduction to Motion graphics, History of motion graphics, Different types of Motion Graphics. Stop Motion ,Cell animation, 2D Motion Graphics, 3d Motion Graphics

Unit-2

Element and Principles of Motion Graphics Elements - Principles of Graphic Design Typography and Colour Theory Principles involved in motion Graphics. Animation Elements of Motion graphics Genre and Target Audience

Unit-3

2D Motion Graphics - 2D Animation and Motion Graphics Cut-out animation using After Effects .Blending modes and layer properties in After Effects. Principles of Key Frame Animation

Unit-4

Introduction to 2.5d Motion graphics, Use of Camera 3D layers in After effects, Usage of Lights and in after effects. Parenting layers in After effects. , Usage of Camera in after effects.

Unit-5

Stop motion used for Motion Graphics, Motion Graphics using MAYA-Modelling and Shading a props, Animating 3d Props in Maya, Lighting a scene inside Maya. Camera animation in Maya.

Reference:

- B. Philip Meggs, & Rob Carter, “Typographic Design: Form and communication”, Fourth Edition , John Wiley & Sons Publishers, 2006
- Park Yong, “Visual Communication in Digital Design”, Youngjin Publishers, 2008
- Gregg Berryman, “C Notes on Graphic Design and Visual Communication” , Axzo Press Publishers, 1990
- William Lidwell, “Universal Principles of Design”, Rockport Publisher, 2003
- Malcom Barnard, “GraphicDesign as Communication”, Imported Edition: Routledge Publisher, 2005

DESIGN & COMMUNICATION FOR GAME DESIGN

Unit 1: Interactive story telling

Game user experience design - Story – three act play – story in interactive forms – decision trees and parallel stories – Segmenting stories as levels – Stories with exposition and metaphors – depth of a story – fun in story telling- story impact – moral and immoral – inspiration and casual interactivity – emergent and doll house stories

Unit 2: 2d Game Prototyping

What is prototyping – importance of prototyping – Using game engines for prototyping - Game maker introduction - understanding interface – sprites –backgrounds -event- and actions – tiles – spaces – sound - Mechanics and triggers – rooms – score

Unit 3: Audio Design And Video Editing

Sound –stereo mono , Audio design software, ADC/DAC –recoding\playing sound encoding\decoding file format mp3,ogg,wav,snd,ac3 audacity software –triggers -BG and prop sound –audio importing in unity3D –audio sours audio licenser –reverb –ambient sound zone - introduction to scripts – Triggers –scripting environment

Unit 4: Game Engine Effect Development

Particle system – uses of particle system – prefab – Sprites and blends – Understanding unity particle system – legacy particle – creating fire – smoke – emitters and particles – sub emitters – lifetime – speed variations – collision – Trail renderer – Line renderer – lens flare – Halo - Projections

Unit 5: Web Design For Portfolio

Flash design - Flash portfolio Introduction -Flash & Action Script - Designing - Flash IDE - Document Setting – Symbols - Types-Converting Images to symbols - Adding Buttons & applying effects to buttons – Actions – Frame - Adding external files. Introduction to Action Script 3.0 – website scripts in AS3

Reference

- Adam Watkins, “Creating Games with Unity and Maya”, Focal press, 2011
- Jacob Habgood and Mark Overmars, "The Game Maker’s Apprentice", Apress, 2006
- Robin Beauchamp, "Designing Sound for Animation", Focal Press, 2005
- "Adobe Flash CS4: The Professional Portfolio", Against The Clock Inc, 2009
- Josiah Lebowitz and Chris Klug, "Interactive Storytelling for Video Games: A Player-Centered Approach to Creating Memorable Characters and Stories", Focal Press, 2011

COMMUNICATION & MEDIA PRODUCTION

Unit-1

Introduction to storytelling – discussion on stories – Types of stories , traditional stories, personal experience stories , created stories – academics theories of story – ways of using visuals to tell story - discussion of convention story telling – transform to live action image – technician vs. artist – history of live action and animated movies

Unit-2

Director as "Captain of the ship" – Role of the director –Responsibilities – understanding the film – language – filmic space and filmic time – the basic units – shots, scene and sequences – inter-locking roles of crew members – The organic structure of screenplay, Idea, Theme, Plot, Character – three dimension of Character – Three act structure – conflict – different types of conflict – crisis – climax resolution – Various stages of screenplay - Directorial applications of lenses – camera angles and camera movements and their meaning – Continuity and compilation – editing – The role of sound in direction

Unit-3

Introduction to Film Production - Basic Principles of Still Camera – Basic Principles of motion camera - Invention of Cinematography – Types of films –Basic Composition - Analogue Vs Digital Image - Compatibility and Aspect Ratio -Lighting, Properties of Light – Factors that influence lighting needs –Light Meter - Measuring the light - Lighting Styles - Types of Lights –Functions of Lights - Lighting Accessories – Equipments - Realistic Lighting Moods – Filters

Unit-4

Compositing : Structure of digital image - Pixel and Colour channel - Digitizing images - Sampling points and resolution - Aspect Ratio - Image, Pixel and Device - Bit Depth - Values and Banding - Video Formats - DV SD HD HDV - Video Standards - PAL and NTSC - Scanning Methods - Progressive and interlaced - Video Compression - Lossy and Lossless - Codec - Encoding and Decoding process - Colour Sampling ratio - Chroma and luma information - Bit Rate - Variable and Constant bit rate - Introduction to Editing Techniques - Online-Offline-Linear-Nonlinear-Editing Styles - Shooting Tips - Ambient Audio, Coverage

Unit-5

Data editing Styles - Pacing and Match cutting and Cutaways - Working with the editing timeline and editing tools- Transitions, BG textures, Censoring, lens flare - Transferring projects to another machine, Removing unused footage - Rendering tools and techniques - Choosing a format, Understanding spatial compression, Understanding temporal compression, HD standards.

References

- Ron Brinkmann, " The Art and Science of Digital Compositing", Morgan Kaufmann, 2008
- Doug Kelly, "Digital Compositing In Depth", Coriolis Group, 2000
- John Jackman, "Bluescreen Compositing: A Practical Guide for Video & Moviemaking", 1997
- Mascelli Silman, V.Joseph, "The Five C's Of Cinematography", Silman-James Press, 1965
- Gorham Kindem, Phd, & Robert B. Musburger Phd, "Introduction To Media Production", Fourth Edition: Focal Press, 2009

- S Ganesh, “Hand Book Of Media Communication And Public Relations”, Radha Publication, 2007
- S Ganesh, “ Studies In Modern Mass Media And Communication”, Radha Publications, 2001
- Friedmann Anthony, “Writing For Visual Media”, Focal Press, 2007

VISUALIZATION II

Unit-1

Gesture Drawing: Male - Female - Portrait (Study from live figure - Outline) - Study from live figure (Pencil shading) - Hand & Feet Study – Hairstyle - Skin colors - Facial Expression.

Unit-2

Storyboard: Introduction of storyboard - Various types of shots - Where and why we need to use these shots - Golden rule of third & where we can break it - Composition and staging of character –Thumbnail sketches.

Unit-3

Storyboard II: Camera movements - Camera Angles - Types of Symbols & Arrows - Continuity - 180 Rule – Final story board with Light and shade

Unit-4

Modelling: Scale and proportion - Discussion of materials based on the concept art - Making skeleton for the character/set with proper balance - Covering with appropriate materiel to give basic form - Applying colour and texture with details

Unit-5

Portfolio Making: How to make an art portfolio - Collection of best works - Composition & mounting –How to protect and preserve the works - Portfolio Presentation.

References

- N, Aditya Chari, “Portrait Techniques Made easy”, Grace Prakasham, 2001
- Gottfried Bammes, “ The Artist Guide to Human Anatomy”, Dover, 2004
- Daniel Carter, and Michael Courtney, “Anatomy for the Artist”, Parragon, 2002
- Aditya Chari, “Figure Study Made Easy”, Grace Prakashan, 2005
- Victor Perard, “Anatomy and Drawing” ,Grace Prakashan, 2003

DESIGN & COMMUNICATION - LAB FOR ANIMATION

- Using Brain storming mind tools generate 20 different ideas
- Critique and write about the choice of the medium available and state example for each
- Develop pre production works as required for the given project
- Design a setup of lights for the given medium
- Develop a simple project to solve a given problem

DESIGN & COMMUNICATION - LAB FOR VISUAL EFFECTS

- Create a text and shape based animation clip formatted for the web selling for the chosen subject.
- Create a logo animation for promotion and identity of the chosen company.
- Create a movie title animation for the chosen theme and genre.
- Create a background abstract animation clip for a TV show.
- Create an opener animation clip for a company portfolio.

DESIGN & COMMUNICATION- LAB FOR GAME DESIGN

- Create an Interactive story book for school children in the topic “Avoidances of food”.
- Create game prototype in game maker
- Design an audio based game using unity.
- Create three different particle effects.
- Create a flash prototype using AS3.

VISUALIZATION II - LAB

- Create a gesture drawing for the given concept
- Create a composition for the given scenario
- Create a physical model for a character/environment of the given concept
- Create a story board for the given story/game

SPECIALIST PRACTICE I – MODELING, TEXTURING & LIGHTING**Unit-1**

Introduction to 3D – history and evolution of 3D - Working in Maya – 3D coordinates – Maya interface – working with menu items, tools and options – viewing the scene – transforming objects – file management – preferences and customization – work with file references – work with proxy references- painting in Maya.

Unit-2

Modelling – Three different types of Surface – Nurbs , Polygon , Sub Division – Advantage of each Surfaces – Moving components of each surfaces – Normal and its use in Polygon and Nurbs Surfaces - Sculpting and its Advantages – Curves and its Types – Trimming – Stitching – Filleting – Character Modelling.

Unit-3

Texturing - UV Texture Editor - Material Nodes ,Texture Nodes – Shading and Texturing Surfaces – Unwrapping a Character model - Reflection and Environment – Character skin study - Creation of different maps including colour map , bump , Specular

Unit-4

Lighting – Direct Light Sources – Maya light attributes - Shadows generation and troubleshooting - Colour theory - 3 point lighting – Interior / Exterior Lighting

Unit-5:

Rendering - Introduction to Rendering and Types – Render Global - Batch Render - Setting up render layers and passes - Compositing in Photoshop

Reference

- John Kundert-Gibbs, Eric Kunzendorf, Dariush, Derakhshani, Mick Larkins, Eric Keller, Boaz Livny, Mark E.A. de Sousa, “Mastering Maya 7”, Wiley Publications, 2006
- Spadaro, Joe & Kim, Don, “Maya Bible”, Wiley Publishing Inc, 2005

SPECIALIST PRACTICE I – COMPOSITING**Unit-1**

Intro to VFX & Fundamentals of Image and Video-Introduction to VFX-practical explaining students about compositing - (orientation)-Digitizing images - Sampling points and resolution-Aspect Ratio - Image, Pixel and Device-Bit Depth - Values and Banding-Video Formats - DV SD HD HDV-Video Standards - PAL and NTSC-Scanning Methods - Progressive and interlaced-Video Compression - Lossy and Lossless-Codec - Encoding and Decoding process Colour Sampling ratio - Chroma and luma information-Bit Rate - Variable and Constant bit rate - Look up table-Linear and log files.-Special workshops/Presentation - visiting lab (scanning/recording)

Unit-2

Matte extraction and The Art of compositing-Matte extraction-Introduction to layer and node based compositing-history of matte extraction (roto/keying)-Use of Cinematography in Visual Effects Shots-Rotoscopy Tools and Techniques-Splines, key frames, interpolation Keying Tools and Techniques-The Art of compositing-Transforms, pivot, key frame animation. Colour theory-colour correction tools and techniques.-Blending modes-Matching layer Attributes. (Grain, depth of field, shadows)-Enhancing the composite (light wrap, edge blend)

Unit-3:

Tracking and Match Moving-Tracking-intro to tracking (ex)-1pt, 2pt and 4pt or corner pinning - planar tracking tools and techniques-introduction to match moving-manual tracking-automated tracking

Unit-4

Wire removal /camera projection-Wire removal-intro to Wire /Rig removal-Wire /Rig removal using tracking-Wire /Rig removal using paint tools-camera projection-intro to Camera projection - 2.5d camera projection-Intro to 3d workflow.-3d camera projection

Unit-5:

CG Compositing live action and stereo conversion-intro to cg compositing-Still image compositing-preparing a 3d scene for multi-pass compositing-3D re-lighting and re-texturing techniques.-shooting techniques involved(HDRI)-tracking the live action footage compositing the CGI with live action footage.

References

- Ron Brinkmann, “The Art and Science of Digital Compositing”, Addison-Wesley, 1999
- Ken Dancyger, “The Technique of Film and Video Editing”, Focal Press, 2002
- Mitch Mitchell, “Visual Effects for Film and Television”, Focal Press, 2004
- Pascal Pinteau , “Special Effects An Oral History”,Harry N. Abrams, Inc ,2004
- Steve Wright, “Compositing Visual Effects: Essentials for the Aspiring Artist”,Second Edition, Focal Press, 2011
- II Billy Woody , “Exploring Visual Effects” , Pap/Cdr edition , Delmar Cengage Learning, 2005
- Steve Wright , “Visual Effects Cinematography”, Second Edition,Focal Press, 2011

SPECIALIST PRACTICE I – LEVEL DESIGN

Unit 1

Introduction to level design

Level planning- top view planning – grid sheet and space planning – Camera and focal view – Perspective for better level design – Coloring perspective- Perspective for level design – isometric art and 2d platform design

Unit 2

2D level art and design

Photoshop for sprite design-pixel ratios and pixel art-sprite animation-BG design-maze – Introduction to level design – level design difference between 3d and 3d – principles and segments - 2d landscape painting

Unit 3

3D multiplayer level design

Understanding the game – identifying core game components – top view plan – introduction to hammer/radiant – identifying game play – blocking and playing and executing textures and clips – play testing – detailing – play testing and finalizing

Unit 4

3D singleplayer level design

Intro to interface - Brush concepts – Room - scale factor – texture – lights - static meshes - kismet for triggers - Building level - Level mapping – lights setup – content browser – adding existing meshes – pipeline for Maya to UDK – static mesh example

Unit 5

Triggers and functions in levels

UDK triggers – UDK GUI setup – GUI textures and setup – HUD and POV distribution – Basic Ai setup – Kismet and other behaviors – Scripting audio events – Advanced trigger setup for cinematic – Packaging

Reference:

- Tom Meigs, "Ultimate Game Design: Building Game Worlds", McGraw-Hill, 2003
- Thomas Mooney, "Unreal Development Kit Game Design Cookbook", Packt Publishing, 2012.
- Alan Thorn, "UDK Game Development", Course Technology PTR, 2011
- Josiah Lebowitz and Chris Klug, "Interactive Storytelling for Video Games: A Player-Centered Approach to Creating Memorable Characters and Stories", Focal Press, 2011

SPECIALIST PRACTICE II – RIGGING & ANIMATION

Unit-1

Introduction to Rigging - Rigging Tools & Techniques – Parenting – Grouping – Set Driven Key – Constrains – Deformers – Lamp Rigging – Robot Rigging

Unit-2

Character Rigging: Character Study – Delete history - Joint Setup – Naming Conversion - Orientation – Mirror joints – joint parenting – arm three joint setup – IK handle tool – IKFK Method - Constrains – Control Parent – leg setup – spine setup – Neck/Head setup – Arm and Leg Stretch - Painting skin weights - mirroring smooth skin weights - expression editor – facial rig - adding expression - adding attributes – Global control

Unit-3

Animation Basics – basic principles of animation – squash and stretch – anticipation – staging – straight ahead and pose to pose – follow through and overlapping action – slow out and slow in – arcs – secondary action – timing – exaggeration – about motion trails – previewing animation – ghosting – types of ghosting – global preferences – frames to display – steps before current frame – step size – frame range

Unit-4

Bouncing Ball With Different Weights - Bouncing Ball with 3 Different balls of different Weights. – Ball with tail – ball with leg

Unit-5

Character Animation: Introduction to Character and studying the rig - Posing and Gestures - Weight Shifting and Body Mechanics - Walk Cycles – Facial Animation

Reference:

- Eric Allen & Kelly L Murdock, Body Language: Advanced 3D Character Rigging, Wiley, 2008
- Brad Clark, John Hood, – Joe Harkins, Inspired 3D Advanced Rigging & Deformations, Thomson Course Technology, 2005
- Cheryl Cabrera, An Essential Introduction To Maya Character Rigging ,Focal Press, 2008
- Richard Williams, “The Animator’s Survival Kit”, Faber and Fabe, 2009
- Ed Hooks, “Acting for Animators”, Comics & Graphic Novels, 2003
- John Halas, “Timing for Animation”, Elsevier/Focal press, 2009
- Jason Osiapa, “Stop Staring”, second edition, Wiley/Sybex, 2007
- Kyle Clark, “Inspired 3D character animation”, Premier Press, 2002
- Peter Ratner, “Mastering 3d Animation”, second edition, Allworth Press, 2004

SPECIALIST PRACTICE II - CG & EFFECTS

Unit-1

Introduction to polygons – polygon Modelling Work flows and tools – Adding details and Normal – Editing and modifying polygons – Cleaning up and optimizing geometry. Introduction to Hyper shade – Material attributes – 2D ,3D and File textures –Building shading networks – Introduction to Un- organic UV mapping – UV Texture Editor overview – Types of UV mapping techniques – Editing UVs – Overview to Photoshop and layers – Creating different types of Texture maps – Baking Textures.

Introduction to Cg lights – Maya light attributes – Shadows generation and troubleshooting – Colour theory – 3 point lighting – Simulating Naturalistic daylight and shadows – IBL (image based lighting) using HDRI – Live action CG matching

Unit-2

Introduction to rigging – Rigging Tools & Techniques – Parenting Method – Grouping – Joint Setup – Orientation – Constrains – Lamp Rigging – Vehicle Rigging.

Principles of animation – Animation Tools and Graph editor – Understanding Timing & Spacing – Path and camera animation – live image with inorganic cg animation.

Introduction to Renderers and algorithms – Setting up render layers and passes – Compositing in Photoshop

Unit-3

Physical and Natural Dynamics - Measurements, hydrostatics, motion, work, power, energy, heat, temperature – Measurement(physical quantity) - length, mass, time, temperature, area, volume, velocity, acceleration, density, force, pressure, energy – Hydrostatics - Thrust, Pressure, atmospheric pressure, Barometers, Manometer, Flotation, buoyant force – Motion - random, translation, rotational, oscillatory, scalars, vectors, Newton’s law, mass, weight.

Introduction Basic Programming -Variables and data types – Basics of MEL commands and its use in driving simulations – Introduction to Expressions Procedures and functions

Unit-4

Introduction to CG dynamics – Simulation (physical, fluid, cloth, crowd, particle dynamics), Pipeline setting, Workflow process, Key frame vs. Simulation – Introduction to Maya dynamics workflow, UI and scripting language – Overview of Particles – Particle object – Rendering Particles – Connect and disconnect fields, emitters, and collision objects – Fields – Overview of fields – Types of fields(Air, Newton, Drag, Gravity, Turbulence, volume axis) Effects(Fire, smoke, shatter, etc.,).

Soft, rigid bodies & paint effects – Soft bodies – Rigid bodies – Rigid body constraints – Springs – Overview of Paint Effects – Paint effect tools – Brushes and Controls –brush animation

Unit-5

Fluid Dynamics – Introduction to fluid effects – Creating fluid effects – modifying fluids object creation with fluid dynamics – playing fluids – open water effects(Oceans & ponds) Texturing & shading fluids – rendering fluids.

ncloth – Introduction to ncloth – Transform constraint painting attributes key framing field – collide – Resistance – Setting Attributes – Pressure – Terrible surface.

Real flow – Introduction to project & overview – Real flow particles and emitter – Daemon introduction – Global and exclusive links – Setting key frames – Import 3D geometry into real flow – Rigid and soft bodies – Working with real waves – Generating mesh around particles – Hybrid – Grid mesh in real flow – Exporting to 3D application.

References

- David Stripinis, “Maya Scripting for 3D Artists: The MEL Companion”, Dreamtech Press, 2003
- Alias ,”Learning Maya 7: Maya Unlimited Features”, Sybex. 2006
- Alias , “Learning Tools (2005) Learning Maya - The Special Effects Handbook”, Sybex, 2005
- Woody II, “Billy G (2006) Exploring Visual Effects”, Thomson Delmar Learning, 2006
- Kerlow, “Isaac V The Art of 3-D Computer Animation and Effects”, Third Edition, John Wiley & Sons

SPECIALIST PRACTICE II – GAME ART

Unit 1: Introduction to Game art

3d and game engine theories Introduction to 3D -2d vs 3d-Introduction to Unity3D –interface –project panel –hierarchy project –inspector panel –terrain – tool, sculpt brush, set height, paint textures, place details, settings –understanding size and scale –proportion –importing exporting assets –sky box

Unit 2: Game environment modeling

Introduction to Maya –interface –polygon modeling – prop modeling - What is game art - what are the core modeling techniques used in games - Theories of LOD - Kit bashing - static meshes and animated meshes - Modeling low poly props with high poly details using transfer maps and bake maps – understanding normal's and one sided objects

Unit 3: Vehicle creation for games

Vehicle modeling basics – proportion and layout –topology –body mesh – assigning basic color maps – baking detail to low poly-unwrapping –texturing and material allocation Primitive rig - Rigid Rigging–Skinning for each model - animation cycles for engines - Animated meshes.

Unit 4: Character creation for games

Cartoon character modeling basics – proportion and layout – character topology – building character body mesh – creating hands and feet – building a profile of the character shape – handling hair and face mesh – assigning basic colour maps – baking detail to low poly - unwrapping, texturing and material allocation – Introduction to character animation for games - introduction to rigging and tools - Primitive rig - Rigid Character Rigging – basic character rigging - Character animation cycles for engines

Unit 5: Digital sculpting techniques

Next-Gen character unwrapping – Character texturing and material allocation – Introduction to zbrush – zbrush tools – sculpting brushes – alpha textures for zbrush – character sculpting – character specular, normal, displacement and glow maps. Introduction to zbrush textures – zbrush tools

Reference:

- Michael McKinley, "MAYA STUDIO PROJECTS: Game Environments and Props", SYBEX ,Wiley Publishing, 2010
- Adam Watkins, “Creating Games with Unity and Maya”, Focal press, 2011
- Penny de Byl, "Holistic Game Development with Unity: An All-in-One Guide to Implementing Game Mechanics, Art, Design and Programming", Focal Press, 2011
- Sue Blackman, "Beginning 3D Game Development with Unity: All-in-one, multi-platform game development", Apress, 2011

SPECIALIST PRACTICE I – MODELING, TEXTURING & LIGHTING – LAB

- Create a props model with texture & lighting.
- Create a vehicle model with texture & lighting.
- Create an exterior set model with texture & lighting.
- Create a Character model with texture & lighting.

SPECIALIST PRACTICE I – COMPOSITING – LAB

- Day to night conversation of a given footage.
- Keying and compositing a shot.
- Tracking and compositing a shot.
- Plan execute and composite a transition shot of 15 to 30 seconds for a fiction/nonfiction video

SPECIALIST PRACTICE I – LEVEL DESIGN – LAB

- Create a Level plan and topography with proper scale using graph sheets.
- Create a 2D or Isometric level using pixel art.
- Create a multiplayer level design using Hammer /GTK radiant.
- Create a Single player level design using UDK.
- Create cinematics using kismet editor in UDK

STUDIO PRACTICE I – RIGGING & ANIMATION – LAB

- Create a lamp rig & Animate
- Create an entire body rig with three joint setup for hand, leg with global control.
- Create a facial rig with proper GUI control.
- Animate the character walking in blank canvas
- Animate the character lifting a weight from ground to the table placed in the distance.

STUDIO PRACTICE I - CG & EFFECTS – LAB

- Create Domino effects.
- Create an explosion using live footage.
- Breaking a wall or glass in Cg using effects.
- Create waterfalls.
- Plan execute and Create a commercial using CG & effects using given footages

STUDIO PRACTICE I – GAME ART – LAB

- Create a basic level prototype using unity game engine.
- Create a game prop with proper map generation.
- Vehicle model with texture, Rigging and animation cycles.
- Character model with texture, Rigging and animation cycles.
- Create a character detail and different map generation techniques using zBrush.

PRE-PRODUCTION FOR PROJECT & DISSERTATION PROPOSAL

- Generate Multiple Ideas, Concept, Story
- Research
- Choose the appropriate Medium & techniques for the story
- Choose a research title related to the project which need to be done later
- Generate the proposal for the research title
- Do the introduction and literature review for the choose title

DISSERTATION

Unit-1

Introduction to Research – Meaning of Research – Objectives of Research – Characteristics of research - Types of Research – Research Approaches – Significance of Research – Research process – criteria of good Research – Research methods Vs Methodology – research and scientific methods – how research is done

Unit-2

Reviewing the literature – search for existing literature – review the literature selected – develop a theoretical framework – develop a conceptual framework - Research Problem – Selecting the Problem – Defining the Problem – Research Design – Need for Research Design – Different Research Design – Research Proposal – Formats of research proposal.

Unit-3

Variables – definition of variables – difference between a constant and variable – types of variable – Hypothesis- definition of a hypothesis – functions of hypothesis – Characteristics of hypothesis – types of hypothesis - Sampling Design – Implications of Sampling Design – Steps in Sampling Design – Criteria of selecting a sampling procedure – Types of Sampling Design.

Unit-4

Methods of Data collection – Collection of Primary Data – Observation Method, Interview Method , Questionnaires Method , Other methods of data collection – Collection of secondary data – selection of Appropriate Method for data collection - Processing and Analysis of Data – Processing Operations – Elements and types of analysis – statistics in research

Unit-5

Interpretation and Report Writing – Meaning of Interpretation , Technique of Interpretation – significance of Report Writing - Different steps in writing report – layout of the research report – types of research report – Evaluation – intervention – development – evaluation process , types of evaluation from a focus perspective.

Reference

- Richard Rickitt and Ray Harryhausen, “Special Effects - The History and Technique, Billboard Books”, Second edition, 2007
- Colin Dempsey, “The Ultimate Encyclopaedia of Mythical Creatures, Barnes and Noble Books”, 2006
- Steve Katz , “Film Directing Shot by Shot”, Michael Wiese, 2004
- Mitch Mitchell ,”Visual Effects For Film and Television”, Focal Press, First Edition

PORTFOLIO

Unit 1

Basics of Portfolio; Importance of portfolio - Elements in Portfolio - Types of Portfolio - The Effective Showcase - Development Techniques - Portfolio requirements - Portfolio Development Techniques Do's and Don'ts - Comments from Experts in the Field.

Unit 2

Introduction to the Digital Portfolio - The Effective Digital Showcase - Production Techniques - Design document -, Different stages of digital media of their specialization -- Digital Portfolio Do's and Don'ts.

Unit 3

Presentation: Preparing professional Theatre/TV/Film Portfolio Presentation Techniques - Professional presentation skill - Presentation Format and requirements.

Unit 4

Marketing: Business Cards - Blog and Web pages - Importance of Business Cards, Blog and Web pages - Design and development of Business Cards, Blog and Web pages - Market analysis for using medium of marketing - Introduction to social networking and its importance

Unit 5

Portfolio Maintenance - Components of a Portfolio - Audience, Tone, Range Format, Portfolio Guidelines - Portfolio Design - Portfolio Budget and Deadline planning - Publishing your portfolio - Portfolio enhancement .

References

- Rafael Jaen, “Developing and Maintaining a Design-Tech Portfolio: A Guide for Theatre, Film and TV”, 2006
- Sara Eisenman , “Building Design Portfolios: Innovative Concepts for Presenting Your Work (Design Field Guides)”, 2004

DISSERTATION LAB

- Thesis and viva voice

STUDIO ASSIMILATION LAB

- Using Brain storming mind tools generate 20 different ideas
- Perform a SWOT analysis of the given company scenario
- Develop pre production works as required for the given project
- State selection of tools and design pipeline for the execution of the given project
- Develop a presentation for pitching the project
- Develop a simple project to solve a given problem

PORTFOLIO AUTHORIZING LAB

- Create logo and graphic signature for representing yourself.
- Create your resume for a professional corporate company.
- Create your blog for showing your personal development.
- Do a video edit of the composed video clips
- Create your audio track to assist your demoreel.
- Create and author an interactive portfolio using any authoring tool

ELECTIVE I - VISUALIZATION TECHNIQUE FOR ANIMATION & VISUAL EFFECTS

Unit 1

Types of Storyboard –Animation storyboard, Music album storyboard, Add film storyboard, Visual effects storyboard, Live action storyboard, multimedia storyboard and Gaming storyboard. - Styles of storyboard – Explore different techniques, methods and media.

Unit 2

Animatics – Meaning and purpose - Types of Animatics – Animatics based on art - Animatics based on photography - Animatics based on digital works – 2D and 3D Animatics - Media, process, time and budget.

Unit 3

Importance of Color in real life and virtual life -Color Psychology –Physical and emotional impact of colors - Color based on Culture and religious practises - Role of Color in Social implications

Unit 4

BG Creation – foreground, mid ground and back ground – Ariel perspective - Matte painting - meaning and purpose – Explore different techniques, media, material and process.

Unit 5

Costume and accessories based on Character–culture, theme, time and place –Environment and mood - props based on the concept. The look and feel of the visual media completely depends on the role of costume and props.

References

- Aditya Chari, “Portrait Techniques Made easy”, Grace Prakasham, 2001
- Bammes Gottfried “The Artist Guide to Human Anatomy”, Dover, 2004
- Daniel Carter, and Michael Courtney, “Anatomy for the Artist”, Parragon, 2002
- Aditya Chari, “Figure Study Made Easy”, Grace Prakashan, 2005
- Victor Perard, “Anatomy and Drawing”, Grace Prakashan, 2003

ELECTIVE I – VISUALIZATION TECHNIQUE FOR GAME DESIGN

Unit 1: Board game design

Colour theory and shape drawing – Deconstruct the board game – elements of the board game – dynamics of the board games – territorial – path – shapes and forms – redesign a exiting board game – rule changing and game balancing – drawing icons and metaphors – introduction to materials and board game design

Unit 2: Introduction to painting techniques and Texturing

Introduction to Photoshop –interface ,brush ,basic tools ,filters ,layers ,masking –text tool - image formats – jpg, png ,tiff ,psd ,gif –painting – Creating textures – seam and seamless textures -UI theory -UI design – HCI basics – UI buttons state and creating buttons styles – HUD interface and HUD immersion - POV

Unit 3: Character sketching and anatomy

Character design – figure study – Head study – gesture drawing – character sketching - variations and stylization – character coloring and finalization – Quick sketching and digitizing – Coloring and iteration – Archetypes – Shapes and silhouettes – Character templates

Unit 4: Storyboard and rough sketching

Story boards and flowcharts - Origin - Importance of a storyboard - Essential parts of a story board - Visual representation of a game – storyboard for games as game flow boards – Side scrolled and top scrolled - Power point as a presentation tools and flow of presentation – World design

Unit 5: Introduction to 2D animation

The principles – the reasons – the word “anima” – what are the primary and secondary movement – why move in games – what is animation – 2D animation basics – key frames and key poses – the centre of gravity and its importance – the power centre – forms to weight functions

Reference Book:

- Brenda Brathwaite and Ian Schreiber, "Challenges for Game Designers", Course Technology, 2009
- Jesse Schell (Author), "The Art of Game Design: A book of lenses", CRC Press, 2008
- Chris Solarski, "Drawing Basics and Video Game Art: Classic to Cutting-Edge Art Techniques for Winning Video Game Design", Watson-Guptill, 2012
- Luke Ahearn, "3D Game Textures: Create Professional Game Art Using Photoshop", Focal Press, 2009
- Brent Fox, "Game Interface Design", Course Technology PTR, 2004

PROFESSIONAL PRACTICE

Unit 1

Soft skills development : Soft Skill vs Hard Skill - Importance of soft skill - Communication – Assertive Communication – Inter-personal Communication – Corporate Communication - Listening Skill – Writing Skill – Presentation Skill – Public Speaking – Body Language - Professional Ethics

Unit 2

Motivate yourself – Motivate Others – Constructive feedback - Sandwich feedback - Team Management – How to be a team player - Leadership qualities - Enhancing Creativity - Time & Stress Management - Enhancing Employability – What is the expectation of any organisation - Employee Engagement

Unit 3

Types of Business Organisation, Private Sector and Public Sector – Firms in the Private sector – Key Differences – Co-operatives – Franchises – Not for Profit Businesses - Writing Resume for different kind of organisation – Types of resumes

Unit 4

Group Discussion - Definition of Group Discussion - Prerequisites of a Group - Benefits in Group Discussion - Salient features – Effective communication – Non verbal Cues/Communication – How to take control of the discussion - Do's and Don'ts in Group Discussion - Important points in Group Discussion

Unit 5

Interview Techniques - Interviewing Methods – In-person Interview - Phone Interview – Panel Interview - Interview Problems – Interview Questions – Problem solving skill - How to give sensible and creative solutions for the questions - Interview Tips & Tricks - Panel Interviews - Confidence – Professional/Corporate Etiquette - Dress Code for a Job Interview

References

- M.S. Rao, “Soft Skills: Enhancing Employability: Connecting Campus with Corporate”, I.K. International Publishing House PVT. Limited, 2010
- Beverly Amer, “New Perspective: Portfolio Projects for Soft Skills”, Cengage Learning, 2011
- Beverly Amer, “Soft Skills at Work: Technology for Career Success”, Cengage Learning, 2008

PRESENTATION TECHNIQUES

Unit 1

What is exhibition design - A brief history of exhibition design – Introduction to Different kind of Exhibition - Understand exhibit design construction and costs - Technologies and techniques

Unit 2

Visual Schematic Display- creating display to make audience understand the whole process of a project output from concept to end product - Design Boards creation - Display artefacts creation - Target Audience – Material and processing.

Unit 3

Communicating design ideas to target & others - pitch – presentation technique - communication theories, visual language - understanding human perception- Influence of culture in designing ideas.

Unit 4

Professional Display methods, Visible Display, Product Display – Installing, spatial perception and design - study of materials, processes, finishes, and structures

Unit 5

Exhibits space planning – Scheduling exhibit refurbishment before at after the show - Exhibit lighting - Exhibition skill for professional practice - Communicate design ideas visually & verbally to sell design idea

References

- Jan Lorenc, Lee Skolnick, Craig Berger, “What is exhibition design, RotoVision”, 2007
- Brett Alexander Lipeles, “Professional Exhibit Manager’s Handbook”, ECKO House Publishing, 2006
- Conway Lloyd Morgan, “Expo: Trade Fair Stand Design”, RotoVision, 1997

PORJECT WORK

- Project and viva voice

INTERNSHIP

- Report/Presentation and viva voice

ELECTIVE II – PROJECT MANAGEMENT

Unit 1

Project - Project Management - Concept and characteristics of a project - importance of project management - types of project - project life cycle - Stages of Project - Statement of Work - Work Breakdown Structure

Unit 2

Project Planning - Project Planning and Scheduling techniques - developing the project network - Limitations - Flow chart – Gantt Chart - budgeting – preparing estimates - Resource Scheduling - Resource allocation method - splitting and multitasking - Multi project resources scheduling

Unit 3

Project performance Measurement and Control - Monitor and assess project performance - schedule - and cost – performance measurement. methods to monitor - evaluate - and control planned cost and schedule performance

Unit 4

Managing Project Teams - Team development process - team building process - stages in developing a high performance project team - project team pitfalls – team role – team dynamics – communicating with Team – working within the organization

Unit 5

Project Quality Management - Concept of project quality - responsibility for quality in projects - quality management at different stages of project - tools and techniques - Quality Management Systems - TQM in projects

References

- Clifford F Gray, Erik W Larson, “Project Management-The Managerial Process” Tata Mcgraw-Hill Publishing Co Ltd
- Jack Meredith, Samuel J. Mantel Jr. “Project Management- A Managerial Approach” John Wiley and Sons
- John M Nicholas “Project Management For Business And Technology” Prentice Hall Of India Pvt Ltd
- James P Lewis “Project Planning, Scheduling And Control” Tata Mcgraw-Hill Publishing Co Ltd

ELECTIVE II - MULTIMEDIA AND INTERACTIVITY

Unit 1

What is interactive multimedia: multimedia- interaction- a brief history of computers & multimedia- a brief history of computers and interaction-what is IMM? Communicative interaction? Objects and agents-channels of communication-artificial language-natural communication-meta languages-components of interactive multimedia systems Knowledge: Introduction-why does knowledge matter-the basic idea of knowledge-a work definition-techniques of knowledge representation-techniques of knowledge elicitation

Unit 2

Understanding users: Why are users important-things you might know about a user-how to apply user knowledge-how to acquire user knowledge-techniques of user profiling-techniques of user modelling Interaction and interface: Introduction-traditional HCI-modalities and interface-channels of communication and the interface-functionality and usability-visual appearance and graphic design. Semiotics: Multimedia content-what is semiotics- the idea of a sign- more complex signs-semiotics and media

Unit 3

Text: Visual perception of text-image on a page-meaning and text-the concept of readability-text and screen, Sound: Introduction-the modality-primary channels of communication-combining sound channels-the technology of sound. Still image: Psychology of vision-the diagram-representational images-juxtaposition of images

Unit 4

Moving images: Perception of motion-a brief history of film- constructing shot-shots into narrative-modern language of film and television. Stakeholders and team working: Team working-players-communication. Product design process: Standard design process-issues for multimedia-categories of multimedia systems-an integrated design process for interactive multimedia

Unit 5

Project design and management: Why-general approach-planning for-management-evolution-documentation-deployment and acceptance, Future trends: Conceptual-cultural-technological-hot topics- conclusion

References:

- Mark Elsom Cook, Principles of Interactive Multimedia, Tata McGraw-hill, 2001
- Fred T. Hofstetter, Multimedia literacy, Tata McGraw-hill, 2001
- Tay Vaughan, Multimedia making it work, Tata McGraw-hill, Seventh Edition, 2008
- John F. Koegel Buford, Multimedia systems, ACM Press, 1994

ELECTIVE III – AUDIO TECHNIQUE FOR POST LAB

- Convert the given file format to .mp3 format
- Convert stereo to mono tracks
- Boost the volume of the given file
- Do a cross fade for the given file
- Trim the given audio into a one second foley from the given track
- Design the audio by mixing various tracks for the given image
- Design the audio by mixing various tracks for the given media

ELECTIVE III - GAME TESTING LAB

The students are expected to complete the following exercise and submit the record work

- Test the given 3 games and list the 10 Art and graphics errors in it and also post the nature of the bug, your points of consideration and steps to recreate them
- Test the given 3 games and list the 10 game play and game mechanics errors in it and also post the nature of the bug, your points of consideration and steps to recreate them
- Test the given 3 games and list the 10 performance and quality errors in it and also post the nature of the bug, your points of consideration and steps to recreate them
- Test the given 3 games and list the 10 functionality and flow errors in it and also post the nature of the bug, your points of consideration and steps to recreate them
- Test the given 3 games and list the 10 user control and user experience bugs in it and also post the nature of the bug, your points of consideration and steps to recreate them
- Test the given 3 games and list the 10 sound and packaging error in it and also post the nature of the bug, your points of consideration and steps to recreate them