

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

(For the CPP/COP students admitted during the academic year 2014-2015 & onwards)

SCHEME OF EXAMINATIONS - (CBCS Pattern)

Part	COURSE TITLE	Inst hrs / week	Examination				Credit
			Dur	CIA	Mar ks	Tota l	
Semester 1							
I	Language - I	6	3	25	75	100	4
II	English - I	6	3	25	75	100	4
III	Core 1: Image Editing Techniques	4	3	25	75	100	4
	Core 2: Graphic Designing	4	3	25	75	100	4
	Core Lab 1: Graphic Designing Lab	3	3	40	60	100	4
	Allied Paper 1: Visual Design	5	3	25	75	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: Web Designing	5	3	25	75	100	4
	Core 4: Web Designing Lab	4	3	25	75	100	4
	Core Lab 2: Internet Basics Lab	2	3	20	30	50	2
	Allied paper 2: Photography	5	3	25	75	100	4
IV	Value Education – Human Rights #	2	3	-	50	50	2
Semester 3							
III	Core 5: Interactive Animation Techniques	6	3	25	75	100	4
III	Core Lab 3: Interactive Animation Techniques Lab	5	3	40	60	100	4
III	Core 6: 2D Animation Techniques	6	3	25	75	100	4
III	Allied paper 3: Foundation Studies	6	3	25	75	100	4
IV	Skill based 1: E Content Development	5	3	20	55	75	3
IV	Non-major elective- I (Yoga for Human Excellence) # / Women's Rights	2	3	50		50	2
Semester 4							
III	Core 7: Non Linear Editing	6	3	25	75	100	4
III	Core Lab 4: Non Linear Editing Lab	6	3	40	60	100	4
III	Core 8: Audio Editing	6	3	25	75	100	4
III	Allied paper 4: Preproduction & Shooting Techniques	6	3	25	75	100	4
IV	Skill based 2: Visual Effects	4	3	20	55	75	3
IV	Non major elective-II General Awareness #	2	3	50		50	2
Semester 5							
III	Core 9: Advanced Art	6	3	25	75	100	4
III	Core Lab 5: Advanced Art Lab	5	3	40	60	100	4

III	Core 10: 3D Design	5	3	25	75	100	4
III	Core Lab 6: 3D Design lab	5	3	40	60	100	4
III	<i>Elective I</i>	5	3	25	75	100	4
IV	Skill based 3: Matte Painting	4	3	20	55	75	3
Semester 6							
III	Core 11: Dynamics Simulation	5	3	25	75	100	4
	Core Lab 7: Dynamics Simulation Lab	6	3	40	60	100	4
	<i>Elective II</i>	5	3	25	75	100	4
	<i>Elective III</i>	5	3	25	75	100	4
	Project Work	5	3	-	-	100*	4
IV	Skill based 4: 3D Animation	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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*For Project and Viva Voce (External) Break up

Project Evaluation: 80 Marks

Viva Voce: 20 Marks

List of electives:

<i>Elective I</i>	Advanced Modeling & Texturing
	Game Art
<i>Elective II</i>	Motion Graphics
	Lighting & Rendering
<i>Elective III</i>	Advanced Visual Effects
	Rigging

**FIRST YEAR
SEMESTER -I
IMAGE EDITING TECHNIQUES**

Unit-1

Starting Adobe Photoshop – Opening Files – Using Adobe Bridge – Working with Bitmap and Vector images – Using the tools – Using the Options bar – Undoing Actions in Photoshop – Using Context menu – Customizing the workspace- Creating a new file – Using the painting and editing tools – Flatten image

Unit -2

Selection tools – Inversing selection – Feathering – Using the various selection tools – Adding to and subtracting from selections – Duplicating layers – Cropping – Paths –Using the Pen tool – Layer styles – Clipping masks – Creating vector masks

Unit-3

Creating Advertisements – About Type – Actions – Using Filters – About Blending modes – Warping Type layers – Adjustment Layers – Masking Layers – Creating and Editing Layer masks – Applying smart filters

Unit-4

Scanning images – Creating a leaflet – Desaturating a Image –Hue/Saturation command – Defining pattern – Working with Channels – Using the Auto Color command – Using the Clone stamp tool – Using the Clone source panel –Using the Healing brush tool – Using the Patch tool – Removing the red eye – Creating Monochrome images

Unit-5

Determine the tonal range in a scanned image – Adjusting color with the Levels command – Decrease / Increase contrast using the Levels command – Adjusting color using the Curves command – Using the Threshold command – Using the Shadow/Highlight command – Photomerge – Advanced layering

References

1. Adobe Photoshop CS5 for Photographers by Martin Evening, Focal Press; Pap/DVD edition (May 24, 2010)
2. Adobe Photoshop CS5 Classroom in a Book by Adobe Creative Team, Adobe Press , 2010

GRAPHIC DESIGNING

Unit-1

Understanding the workspace of Illustrator – Changing the view of the artwork – Logo designing – Using the shape tools – Aligning objects – Using the pathfinder feature- Using the Attributes panel – Applying a gradient fill

Unit-2

Digital Illustration – using the pencil tool – About Symbols – Creating symbols – Using the Mesh tool – Advertisement designing – Using the Transform Again command – using Clipping mask – Poster designing – Creating a Opacity mask – Rasterization

Unit-3

Converting Type to Outlines – Using Appearance attributes – changing the units – using the Live Trace – using the live paint tool – menu card designing - Packaging

Unit-4

Getting to know the InDesign work area – Restoring default preferences – Creating newsletter – creating and applying paragraph styles – Book Designing – Master pages – Changing page margin and column settings – about spread – specifying automatic page numbering

Unit-5

Displaying and hiding master page items – placing images – flowing text automatically – editing styles – wrapping text around objects - understanding pdf – adding hyperlinks – exporting to pdf – creating a book file – setting the order and pagination – synchronizing book documents

References

1. Adobe Illustrator CS5 Classroom in a Book by Adobe Creative Team, Adobe Press , 2010
2. Adobe In Design CS5 Classroom in a Book by Adobe Creative Team, Adobe Press, 2010Noreen Morioka, Terry Stone Sean Adams, Logo Design Workbook: A Hands-On Guide to Creating Logos, Rockport Pub, 2006

GRAPHIC DESIGNING – LAB

Students are required to create storyboard, and design for the following:

1. Design the logo, visiting card, letter head and envelop for a design studio. Provide appropriate name and tagline
2. Design a newspaper advertisement for an upcoming 3D movie or a jeweler
3. Design a poster for a workshop organized by the institution or a social awareness message like saving water, electricity etc
4. Design a brochure or a product catalogue or a menu card
5. Create a package for a product

VISUAL DESIGN

Unit-1

Design fundamental – Basics of Design – Characteristics of a good design - visual composition – Elements of design – principles of design – creativity – fundamental of creativity – importance of creativity – developing creativity – exercises

Unit-2

Colour theory – basics of colour theory – attributes of colour –colour wheel – colour harmony – colour schemes – colour blending – additive model – subtractive model – colour contrast – colour psychology – colour strategy – colours in printing - exercises

Unit-3

Typography- typeface anatomy – measurements – typeface classifications – type families – spacing and alignment – selecting appropriate fonts – tips and techniques – Graphics – importance of graphics – major classifications – image manipulation – exercises

Unit-4

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 – logo designing –brochure designing - exercises

Unit-5

Perspective views – Concept of perspective – types of perspective views – perspective terminology – linear perspective construction methods - single point perspective – two point perspective - three point perspective – aerial perspective - exercises

References

1. Tina Sutton, Bride M. Whelan, The complete colour harmony, Leads Press, 2008
2. Dorothee Mella, The language of colour, Grand Central Publishing, 1988
3. David Jury, What is Typography? , RotoVision , 2006
4. Conway Lloyd Morgan, 20th Century Design: A Reader's Guide, Architectural Press; illustrated edition edition , 2000
5. Lois Fichner-Rathus, Foundations of Art and Design, Wadsworth Publishing; First edition , 2007

SEM-II WEB DESIGNING

Unit-1

Introduction to web design – about the work area – using the painting and editing tools – using the selection tools – using the hue/saturation command – using the image size command – creating the banner – clipping masks – creating patterns

Unit-2

Layer masking – brush shape dynamics and scattering – adjustment layers – understanding paths – setting layer blending mode – creating effects – creating animations – optimizing images for the web

Unit-3

HTML – adding a document title – basic text formatting – hyper links – inserting images – inserting tables – adding content to the cells – inserting objects – merging cells for table header

Unit-4

Introduction to CSS – Page formatting – text formatting properties – Difference between DIV and tables – creating layout using div and css – Site management – local and remote websites – Asset management

Unit-5

Creating the home page layout using DIV – linking pages – Creating the rollover behaviors – pop up message behavior – navigation bar – Dreamweaver templates - JQuery

References

1. Adobe Photoshop CS5 Classroom in a Book by Adobe Creative Team, Adobe Press , 2010
2. Adobe Flash CS5 Classroom in a Book by Adobe Creative Team, Adobe Press, 2010
3. Adobe Dreamweaver CS5 Classroom in a Book by Adobe Creative Team, Adobe Press, 2010
4. The Principles of Beautiful Web Design by Jason Beard, SitePoint; 1 edition, 2007)
5. Web Design For Dummies, 2nd Edition by Lisa Lopuck, For Dummies, 2006)

WEB DESIGNING – LAB

Students are required to write code snippets, which covers the following objectives

1. Design a website for a product. Create the design in Adobe Photoshop, use HTML and CSS for creating the web page. Provide appropriate links and navigations. Add animations wherever required.
2. Design a website for a Corporate company. Create the design in Adobe Photoshop, use HTML and CSS for creating the web page. Provide appropriate links and navigations. Add animations wherever required
3. Design a banner advertisement

INTERNET BASICS – LAB

Students are required perform the following tasks:

1. To create an email id.
2. To create, compose, edit and send a mail
3. To forward a mail and to reply for a mail.
4. To send a mail with an attachment.
5. To send a mail to a large number of recipients using cc and bcc options.
6. To search a thing using a search engine.
7. To open and read newspaper sites, TV program schedules using Internet.
8. To upload your resume with any one job portal.
9. To create a blog
10. To create a post and edit it
11. To attach image and video to a post.

PHOTOGRAPHY

Unit – I

History of Photography – History of cameras - Holding camera – Principal focus and focal length - Basic camera settings - Types of image format - SLRs Vs DSLRs Elements of Photography - Depth of field.

Unit – II

Rule of Thirds - Shooting Vertical vs. Horizontal - Choosing a point of interest - Angle of view - Placing subjects off center – Backgrounds -□ Foregrounds-□ Composition– Light - Positive and negative space – Framing -□ Color vs. Black and White Photography □ □ □ Symmetry Perspective - Assignment 1: Portraits.

Unit - III

Different kinds of aperture – Different type of shutter speed — Leading Lines - ISO speed – Flash light – Soft box light – Umbrella light – Cool light – Types of camera lenses - wide angle, telephoto - zoom lenses – macro lenses - fish eye lenses - tripod stand - lens hood – Camera Filters – Soft focus - Assignment 2: product photography.

Unit -IV

Polarizing Filters - Soft Focus Filters - The Star Filter - The Fog Filter - Environmental Portraits - Short Lighting - Broad Lighting – Bounce – Diffuser - Key Light - fill light - back light - Snoot – Reflector - Working with cameras – Assignment 3: Fashion photography - Assignment 4: landscape photography - - Assignment 5: Still Life.

Unit - V

Image editing software interface navigation – Layers – Tools – Adjustment – Color balance – Hue/Saturation – Photo Filter – Brightness Contrast – Black and White – Exposure – curves – levels – Filters – Bridge – Temperature – Tint – Fill light – Recovery – Vibrancies – Clarity – Blacks - Interpretative Assignment: CD or Album Design.

Reference:

1. The Digital Photography Book by Scott kelby, Peachpit Press; 1 edition, 2006
2. Complete Digital Photography by Ben Long, Cengage Learning PTR; 7 edition, 2012
3. Master Your DSLR Camera: A Better Way to Learn Digital Photography by David Becker, Open Air Publishing, 2012

**SECOND YEAR
SEM-III**

INTERACTIVE ANIMATION TECHNIQUES

Unit-1

Getting to know the work area - choosing a new workspace – the stage – changing the stage properties - timeline- using the properties inspector – working with panels – using the tools panel – previewing a movie – publishing a movie

Unit-2

Working with graphics – understanding strokes and fills – creating shapes – making selections – changing shape contours – grouping objects – using the sub selection tool – using the pen tool – free transform tool – applying a gradient fill – using the brush tool – pencil tool

Unit-3

Creating animation in Flash – about animation – keyframes – inbetween frames – about layers in animation – selecting multiple frames – using classic tween –using shape tweening – Creating a frame by frame animation

Unit-4

Symbols – symbol advantages – Graphic symbols – creating banner advertisements – banner ad design tips – using the align panel – adding and animating the caption – using the blur filter

Unit-5

Masking – creating buttons – understanding Action script 3.0 – scripting terminology – actions panel – creating event handlers for buttons – naming rules – fscommand- creating an interactive recipe book – about scenes – gotoAndPlay action – frame labels

References

4. Adobe Flash Professional CS5 Classroom in a Book by Adobe Creative Team, Adobe Press , 2010
5. Adobe Flash Professional CS5 on Demand by Steve Johnson, Que Publishing, 2010
6. Adobe Flash CS5: The Professional Portfolio by Inc. Against the Clock, Against The Clock, Inc, 2010

INTERACTIVE ANIMATION TECHNIQUES – LAB

Students are required to create the following:

1. Create a banner advertisement for a product.
2. Create a banner advertisement for a company
3. Create a e-greeting card for new year

2D ANIMATION TECHNIQUES

Unit-1

Introduction to Animation – types of animation – the traditional process – principles of animation : stretch and squash – timing and motion – anticipation – staging – follow through and overlapping action – straight ahead action and pose to pose action – slow in and out – arcs – exaggeration – secondary action – appeal – solid drawing

Unit-2

Flash animation concepts: the timeline – symbols –tweening– easing in and out – hinging symbols – script writing: importance of script – conflict – anatomy of screenplay – scenes – slugline – action – dialogue

Unit-3

Storyboard - creating a story board – basic camera shots – the extreme long shot – the long shot – the mid long shot – the close up shot – the extreme close up – other useful camera shot – cutaway shot – cut in shot – over the shoulder – point of view shot – noddy shot – camera moves – zoom in/zoom out – truck in/truck out – camera transitions – the cut – fade in/fade out – dissolve – blur, pan or zip pan

Unit-4

Audio – creating and importing audio into Flash – sound recording tips –importing audio elements and managing audio files – editing audio in Flash – using outside software – preparing the timeline for Audio – lip synching – basic cartoon phonetics and vocalization – the vowels – consonant sounds – making words – Anime dialogue

Unit-5

Animation process– ball animation – animating the shadow – preparing the character for animation – dissecting the body parts into separate symbols – creating symbols – setting pivot points – rigging – distribute to layers – creating the walk cycle – simple four leg walk animation – turn around animation – creating scenes for an animated story – special effects

References

1. Bill Davis, Creating 2D animation in a small studio , GGC Publishing , 2006
2. Sandro Corsaro and Clifford J. Parrott, Hollywood 2D Digital Animation: The New Flash Production Revolution ,Course Technology PTR; 1 edition , 2004
3. Tony White, Animation from Pencils to Pixels: Classical Techniques for the Digital Animator , Focal Press; 1 edition, 2006
4. Steve Roberts, Character Animation: 2D Skills for Better 3D,Focal Press; Second edition, 2007
5. Hedley Griffin, The Animator's Guide to 2D Computer Animation, Focal Press, 2000

FOUNDATION STUDIES

Unit-1

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 - Constructing the side view using basic shapes - Constructing various action poses using basic shapes – Male body vs. Female body – Costumes

Unit-2

Construction of human head –Positioning of the features proportionately on the face - Front view vs. side view – $\frac{3}{4}$ th view – Female face vs. Male face – Child face – Aged face

Unit-3

Construction of hands diagrammatically - Construction of feet diagrammatically –Drawing a male body with details of head, hands and feet - Drawing a female body with details of head, hands and feet – Drawing male and female figures with various costumes

Unit-4

Cartooning - Types of cartoons – methodical development of a cartoon – 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-5

Storyboard – Origin – Importance of a storyboard – Essential parts of a story board - Visual panel – Description of the scene – Dialogues / voice over/ bg music - Construction procedure - Camera angles – Scenes and shots – Animatics – Creation of animatics

References

1. Ken Hultgren, The Art of Animal Drawing: Construction, Action Analysis, Caricature, Dover Publications, 1993
2. Burne Hogarth, Dynamic Figure Drawing, Watson-Guptill, First edition, 1996
3. Anthony Ryder, The Artist's Complete Guide to Figure Drawing: A Contemporary Perspective on the Classical Tradition Watson-Guptill; 1st edition, 1999
4. Jack Hamm, Drawing the Head and Figure, Perigee Trade, 1982 Giuseppe Cristiano, Storyboard Design Course: Principles, Practice, and Techniques Barron's Educational Series, 2007

E- CONTENT DEVELOPMENT

Unit I

Designing the interface – adding layer styles – about action scripts and events – mouse and keyboard events – using the actions panel – tracking playback and downloading progression – preloader – using the enterFrame event – using the timer event – using the fsCommand

Unit II

Duplicating symbols – changing color dynamically – Use of time in Flash – creating arrays – determining the current date and time – using the conditional operator

Unit III

loading MP3s dynamically – loading external sound – using the sound class – using the soundChannel class – using the soundtransform class – reacting to dynamically loaded sound

Unit IV

Targeting parent movie – dynamically changing the cursor – creating movie slider – changing an instance's type – using the startDrag function – parameters of startDrag function – using the stopDrag function – using dynamic text – changing text dynamically – collision detection using hitTest – using the gotoAndPlay action

Unit V

XML- using xml with flash – Learning XML basics – XML document – using XML document – formatting XML – Parsing XML – Loading XML – Components – The components panel – connecting to external XML files – data integration – working with schemas in the schema tab – using the user interface components

References

1. William K. Horton, e-Learning by Design, Pfeiffer, 2006
2. Michael W. Allen and Michael Allen, Michael Allen's Guide to E-Learning, Wiley, 2002
3. Adobe Creative Team, Adobe Flash professional CS5 Classroom In A Book, Adobe Press, 2010

SEM-IV NON LINEAR EDITING

Unit-1

Online editing – time code – in and out point – elements of Premiere – commands and interface – non linear editing – non destructive editing – interlaced / progressive scan video – editing time base – monitor window controls – functions of the source view, program view, timeline – relationship between the timeline and the program view in the monitor window – editing clips into a sequence – selecting one or more clips

Unit-2

Splitting a clip – understanding title – title safe and action safe zone – previewing titles on an external monitor – editing interface: three point editing – overlay and insert edits – trimming using slip and slide edits – using the trim window – opening the trim window – finding edit you want to trim

Unit-3

transitions – displaying transitions – aligning transitions by dragging – replacing transitions – clip handles and transitions - Using workspaces – applying and controlling standard effects – removing multiple effects applied to a clip – animating effects – effects control window – reordering effects

Unit-4

Showing or hiding keyframe area – showing or hiding the timeline beyond a clip's in and out point – playing audio in selected clip – applying video effects – changing filter effects and settings – change effects over time using keyframes – removing all keyframes of an effect

Unit-5

Customizing the project window display – adding clips from the project window automatically – generate a sequence automatically – working with the audio mixer window – creating a storyboard – setting a clip's thumbnail image - audio editing – connecting a DV source – connecting an analog video source – using the capture window – capturing analog audio – file export settings – exporting to video tape – codecs and compression

Reference

1. Adobe Premiere Pro Classroom in a Book by Adobe Creative Team, Adobe Press, 2007
2. Adobe Premiere Pro for Dummies by Keith Underdahl, For Dummies; 1 edition, 2003
3. Adobe Premiere Pro CS3 Bible by Adele Droblas and Seth Greenberg, Wiley; Pap/DVD edition , 2007
4. Sams Teach Yourself Adobe Premiere Pro in 24 Hours by Jeff Sengstack, Sams; 2 Sub edition, 2004
5. Joseph V. Mascelli, The Five C's of Cinematography: Motion Picture Filming Techniques, First Silman-James Press Ed edition, 1998

NON LINEAR EDITING LAB

1. “AIDS AWARENESS IN INDIA“ - Using different types of images edit and add the necessary audio and music to show the 1.5 duration presentation.
2. “SMOKING INJURIOUS TO HEALTH “ - Using different types of video clip edit and add the necessary audio and music to show the 1.5 min duration presentation.
3. To add the different types of title text animation using multiple effects from effects control panel.
4. Use different types of images and videos and add the multiple color mode using color correction and effects.
5. Take the different types of jingles and add the necessary visuals and show the 30 second presentations

AUDIO EDITING

Unit-1

Sound Forge: sound – digital audio - sampling rate – bit – bit depth – hertz – sound card – amplitude – decibels – audio for the web – popular audio formats for the web – sound forge interface

Unit-2

Recording with Sound Forge – the record dialog box – checking recording levels – adjusting the input levels – setting up the recording environment – takes, regions and files – effects – Delay/echo

Unit-3

Reverb – chorus – pitch – changing mono to stereo – live voice recording in door and out door – noise reduction

Unit-4

Synchronizing the audio and video – mixing voice and music - recording the different types of effects sound

Unit-5

Multi track audio mixing – cartoon sound mixing with visuals – sound splitting with different channels (left and right channel) – introduction to 3d stereoscopic sound

References

1. Mark Scetta, “Gardner's Guide to Audio Post Production”, Garth Gardner Company, 2007
2. Roey Izhaki, “Mixing Audio: Concepts, Practices and Tools”, Focal Press, 2008

PRE PRODUCTION AND SHOOTING TECHNIQUE

Unit-1

Writing Story – Idea / Concept - Synopsis – Background – Writing one line script – Scene and shots splitup – Story board – defining the characters – Types of character - Planning Budget - Scheduling – Costume.

Unit-2

Camera angle – Camera Movement – Low Angle – High Angle – Close up – Ex-close up - Mid-long shot – Ex Mid long shot – Long shot – Ex-Long shot – Camera panning (left to right) (right to left) – Camera tilt up – Camera tilt down.

Unit-3

Camera blocking – Shot Composition – (Rules – 180 degree) – (30 degree rule) - Aesthetics – Continuities – The rule of thirds – Clap board - Editing report – Preview monitoring – Understanding lighting – 3 point lighting

Unit-4

Camera lenses – Aperture –Shutter Speed – Lens: Types – Filters – DSLR digital cameras – Film camera – Different types of storage format – Depth of field – Deep focus – Shallow Focus – Follow Focus

Unit-5

Rough Editing – Final Editing – Dubbing – Music posting / Re recording – Mixing (mixing the all audio tracks – Adding visual effects – Adding the audio sound effects (special effects) – Exporting different medium format - Previewing the final output.

References

1. Film is Not Dead: A Digital Photographer's Guide to Shooting Film (Voices That Matter), Jonathan Canlas, Kristen Kalp, New Riders, 2012
2. Writing the Screenplay: TV and Film, 2/E, Alan.A.Armer, Waveland Pr Inc, 2002
3. Pre-Production Planning for Video, Film, and Multimedia, Steve Cartwright, Focal Press, 1996
4. The Filmmaker's Eye: Learning (and Breaking) the Rules of Cinematic Composition, Gustavo Mercado, Focal Press, 2010

VISUAL EFFECTS

Unit-1

Introduction to visual effects software - Art of Tracking - Art of Rot scoping - Main Toolbar - Viewer – Controls - Timeline Controls - Layer Controls - Layer Properties - Preferences - Output Settings - System Default Clip Settings - Shortcuts Key

Unit-2

Starting a New Project - Creating a New Project - Importing your footage - Check your Settings (Name, Location, Frame Range, Frame Rate, Separate Fields) - Advanced Options(Frame offset, Caching) - Setting the In and Out Points - Stabilization Overview - Exporting Stabilized tracking data

Unit-3

Tracking Basics - Selecting Track - Tracking the Spline - Checking Track Importing Mattes - Adjusting Track - Starting Track Adjustment - Reference Points - Reference Point Quality –Four Reference Points - Working Backwards - Master-Reference Points - Changing Master Frame for a Reference Point - Selecting Different - Reference Points - Nudging Reference Points

Unit-4

Basics of Rot scoping - Adding Tracking Spline - Choosing Tracking Parameters - Turning Layers On and Off - Adding Roto Spline - Feather edges - Roto Splines - Creating Key frames - Add Motion Blur - Changing the Matte Blend Mode - Viewing Mattes -Changing the Background Color - Colorize Matte Overlay - Preview Rendered Mattes

Unit-5

Exporting Tracks - Exporting Tracks to Nuke - Exporting Corner Pin tracks to Nuke - Exporting Mattes- Exporting Rendered Mattes - Exporting as G-Masks - Exporting RotoPaint nodes to Nuke - Curve Editor - Navigating Curve Editor - Changing Interpolation of Keys - Changing Extrapolation of Keys - Clip Management - Importing Clips - Clips from Workspace - Relinking Clips in Workspace -Selecting a Clip to Track-Selecting a Clip to Rot scope

References

1. Ron Brinkmann, The Art and Science of Digital Compositing, Second Edition: Techniques for Visual Effects, Animation and Motion Graphics, Morgan Kaufmann, 2008
2. Steve Wright, Digital Compositing for Film and Video, Focal Press, 2010
3. Lee Lanier, Professional Digital Compositing: Essential Tools and Techniques, Sybex, 2009
4. Steve Wright, Compositing Visual Effects: Essentials for the Aspiring Artist, Focal Press, 2007

**THIRD YEAR
SEM-V
ADVANCED ART**

Unit-1

Human anatomy - Line of action – Constructing stick figures - developing with geometric blocks – steps in full body finish – action poses – fore shortening – drawing figures in different perspectives – male body proportions - female body proportions – visualizing body forms in flow lines – Animal anatomy basics – Birds anatomy basics

Unit-2

Muscle study – Male body muscles - Female body muscles –Body muscles in profile views – Drawing arms and legs in different views – Drawing the Torso - Studying the muscles in various views - Head study – Drawing heads in various angles – Female heads - Hands and feet in various possible views - Details of facial features –Costume / Drapery study - Facial Expressions and emotions

Unit-3

Character design – Essentials of character designing – Aesthetic appeal, Functional, Distinct, Personality, Originality, Purpose, Target audience, Exaggerated characteristics, 3D Visualization etc. - Character types – Heavy villainous character, Pretty/Cute character, Mad/weird character. Ridiculous/ Humorous character – Alien Characters -Props and set design – Developing props diagrammatically

Unit-4

Developing BG - Over-lays and Under-lays – Creating panning BG – Drawing a location in different angles and different lightings- Art for Animation – Lip movements – Vowels and consonants - Character sheet/ Model sheet- Drawing a character in various action poses - Turnaround - developing a character in front, side and back views proportionately

Unit-5

Walk cycle drawings – Drawing 8 stages of a walk - Run cycle – Fly cycle – Four leg walks - Drawing animation sequences – Straight ahead vs. Pose-to-pose methods of animation drawings - Extremes, Break ups and In-between drawings - Concept art – Visual representation of an idea, design or mood.

References

1. Gottfried Bammes, The Artist's Guide to Human Anatomy , Dover Publications , 2004
2. Edouard Lanteri, Modelling and Sculpting the Human Figure , Dover Publications1, 1985
3. Michael McKinley and Valerie O'Loughlin, Human Anatomy, McGraw Hill Higher Education; 2nd edition, 2007
4. Frederic H. Martini, Michael J. Timmons, and Robert B. Tallitsch, Human Anatomy, Benjamin Cummings; Sixth Edition, 2008
5. Paul Wells, Joanna Quinn, and Les Mills, Basics Animation: Drawing for Animation, AVA Publishing , 2008

ADVANCED ART – LAB

1. Create a sketch of a live model with various action poses.
2. Create a concept art for the following: Alien, cartoon character

3D DESIGN

Unit-1

Introduction to user interface – working in 3D – views –the maya workspace - creating manipulating and moving objects – perspective and orthographic windows – creating curves – editing curves – attaching and detaching curves – inserting knots – reverse curve direction - – adding points to a curve – using curve editing tool

Unit-2

Editing nurbs - rebuilding surfaces – surface fillets – stitching surfaces – creating polygons – append polygon tools – combine – polygon Booleans – mirror geometry – polygon smooth tool –subdivision surfaces – polygon reduction – the cut face tool – extruding polygon faces and edges

Unit-3

Using Nurbs curves to create a model – creating Basic table top Props – the polygon robot modeling – Modeling an Exterior shot – hypershade - understanding Maya Materials and textures – texturing the Robot – texturing table top Props - texturing a sample of exterior element

Unit-4

Rigging – joints and tools – ik - Fk – spline ik – Types of Constrains - Skinning – Primitive Rig - traditional animation fundamentals – the wave principle – overlap – using the time slider – setting playback range – setting playback speed – setting keyframes – auto key – keyframe options – channel control – editing keyframes – editing timing of keyframes – editing in-betweens – changing a key pose – moving and scaling keys – cutting, copying and deleting keys – using breakdowns – animation types – using graph editor – Basic character animation.

Unit-5

Adding lights – light theory – artistic theories – types of light – common attributes – ambient lights – spot lights – point lights – directional lights – area lights – volume lights – working with shadows – depth map shadows – baking shadows – raytraced shadows
creating cameras – focal length – cameras in Maya – types of cameras – resolution gate – safe display region – safe action – safe title – use background –converting 3d scenes to 2d images- the render view – navigating in the render view – keeping images in render view – rendering regions – snapshots – setting render global – image name and format – Batch Rendering.

References

1. Learning Autodesk Maya 2008, Foundation by Autodesk Maya Press, Sybex, 2007
2. Maya Professional Tips and Techniques by Lee Lanier, Sybex , 2007
3. Mastering Maya 2009 by Eric Keller, Eric Allen, and Anthony Honn, Sybex; Pap/DVD edition, 2009
4. Introducing Maya 2009 by Dariush Derakhshani, Sybex; Pap/Cdr edition , 2009
5. The Maya, Seventh Edition (Ancient Peoples and Places) by Michael D. Coe, Thames and Hudson; 7 edition, 2005

3D DESIGN LAB

1. Design simple prop modeling like Telephone, Chair, and Computer Table
2. Design simple exterior types of modeling like Shop, Bus Stand, and Hut
3. Design simple interior types of modeling like Bed Room, Dining Hall, and Living Room

ELECTIVE- I ADVANCED MODELING AND TEXTURING**Unit-1**

Creating interior – subdivision surfaces – using extrude – creating a new layer – using the cut faces tool – convert subdivision surfaces to polygon – using the Mesh - Smooth option – using split polygon tool – using the Mesh - Combine option – using Merge Edges option – using the subdivide proxy option – using the Mesh - Extract option – using Move tool – using the merge edge tool – modeling the organic characters.

Unit-2

UV texture editor window – Planar mapping – Auto mapping – Spherical Mapping – Cylindrical Mapping - Cut UV Edges – Move and Sew UV Edges –UV snapshot - Enabling shadows using the Use depth map shadows option –Unfold UVs – Relax UVs – Cut UVs – Split UVs – Align UVs – Display channel – Rotate selected UVs – UV lattice tool – Smudge UVs – Smooth UVs.

Unit-3

Maya hypershade material – Different types of hypershade utility - Blinn – Lambert – Anisotropic - Phong – Pong E – Ramp shader – Surface shader – Use Background – 2d texturing map – 3d texturing map – Common Material Attribute - Color– Specular shading - Special effects option – Retrace option – Bump map – Incandescence – Transparency – Ambient color – Diffuse.

Unit-4

Rendering IPR render – Rendering current frame – Rendering quality – Frame padding – Image resolutions setting – Keep image in Rendering view – Frame region rendering – Different types of channel – Snapshot – Choosing Rendering camera – Render save image – Test Rendering Resolutions.

Unit-5

ZBrush basic concepts – the concept of pixel – buttons – switches – sliders – working with 3D objects – Gyro – ZBrush and Maya – using the quick menu – Zintensity – focal shift – masking – hiding objects – stencils – stretch – scaling stencil horizontally and vertically – Basic sculpting – activating symmetry – resize the draw tool – Deformations – saving the files – Transpose master – enabling edit mode –Transpose tool – displacement map – Maya model prep

Reference

1. Maya 8 Character Modeling by Gary Oliverio, Jones and Bartlett Publishers, 2006
2. Advanced Maya Texturing and Lighting by Lee Lanier, Sybex; 2 edition, 2008
3. Advanced Maya: Character Modeling by Kenny Cooper and Jim Lammers, Trinity Animation, Inc., 2003
4. Jason Patnode, Character Modeling with Maya and ZBrush: Professional polygonal modeling techniques , Focal Press; Pap/Dvdr edition, 2008
5. Scott Spencer, ZBrush Digital Sculpting Human Anatomy , Sybex, 2009

ELECTIVE- I GAME ART

Unit 1: Introduction to Game art

3d and game engine theories Introduction to 3D -2d vs 3d-Introduction to Game engines – 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

Polygons – polygons render mechanism - 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: Game environment Texturing

Introduction to materials – Understanding difference between textures, materials and shaders – Applying and understanding game engine shaders – Understanding the texture rules and power of two advantage – Introduction to file textures and file formats support – Unwrapping models – painting textures and details – texture mip-mapping and compression

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 Book:

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

MATTE PAINTING

Unit-1

Matte paintings - use image editing software to composite multiple images - layer masking – the clone stamp tool

Unit-2

Creating the day for night effect - using the curves command - using levels - layer blending modes

Unit-3

Screen, lighten, soft light blending modes - adjusting the brush settings - using brush to create snow effect - invert command - the colour balance command – filters

Unit-4

Custom brushes, custom brushes for skin, creating a brush from scratch in Photoshop, matte painting tips and tricks, painting fur

Unit-5

Painting realistic skin, sandstorm, snowstorm, painting a cityscape, planets and star fields, painting water surface

References

1. Owen Demers, “Digital Texturing and Painting”, New Riders Press, 2001
2. Dylan Cole, Alp Altiner, Daniel P. Wade, Chris Stoski D'artiste “Matte Painting: Digital Artists Master Class”, Ballistic Publishing, 2005

SEM-VI DYNAMICS SIMULATION

Unit-1

Particle and options – Create Emitter – Emit from the object – Use selected Emitter – Pre point emission rates – Make collide – Particle Collision Event Editor - Goal – Instance (Replacement) – Sprite Wizard – Emitter types – Omni – Surface – Volume – Curve – Directional – Creating two different types of example using particle and emitters.

Unit-2

Introduction to the types of field - Air field – Drag field – Gravity field – Newton field – Radial field – turbulence field – Uniform field – Vortex field – Volume axis – turbulence field attributes – Magnitude - Frequency – Noise level - Attenuation – Different types of axis controls – Creating two different type of example using fields.

Unit-3

Introduction to Soft body / Rigid body simulation in maya – Create active rigid body – Create passive rigid body – Create nail constrain – Create Pin constrain – Create Hinge constrain – Create Spring constrain – Set Active Key – Set Passive Key – Break Rigid Body Connections – Paint soft body Weights tool – Create two different types of example using active / passive rigid body.

Unit-4

Introduction to Particle type - Multipoint – Multi streak – Numeric – Points – Sprits – Introduction to fluid effects – Fluid 2d container – Fluid 3d container – Make collide – Get fluid example – Ramp position – Ramp Velocity – Lifespan PP – World Velocity – Ramp Acceleration – Creating two different type of example using fields.

Unit-5

Software Rendering – Blobby surface – Cloud – Tube – Conserve – Hardware Rendering - Flip book clap – Clear Flip book options – Hardware render attribute – setting up the camera – Scale buffer – Render alpha sequence frame from software render and hardware render.

Reference

1. Maya Visual Effects: The Innovator's Guide [Paperback] Eric Keller
2. Learning Autodesk Maya 2008: The Special Effects Handbook by Autodesk Maya Press (Oct 29, 2007)
3. Learning Maya 6 – Dynamics' by Alias (May 14, 2004)
4. Maya studio projects – Dynamics – Todd Palamar 2009
5. Soft and Rigid Bodies in Maya by Digital Tutors

DYNAMICS SIMULATION LAB

Students are required to

1. Create a water flow from a Tap using Particles and Different types of Fields which is essential for it.
2. Create the effect of dry leaves falling due to the heavy wind blow.

ELECTIVE –II MOTION GRAPHICS

Unit-1

Introduction to Compositing techniques- Introduction to Interface - Layer based application and basic process- Masking tools – Steps for good rotoscoping – Rotoscopy management and quality check techniques – Rendering tools and techniques

Unit-2

Color Terminologies: Hue, Saturation, Value- Shadows, Midtones, Highlights – Gamma, Gain, Offset – Setting Black and white points – Color remapping and color suppression – Color matching and day to night – Color matching

Unit-3

Introduction to Tracking: 1 point, 2 point, 4 point or corner pinning – Track region – Tracking tools in After Effects – Color channel based tracking techniques – Basic track marker setup during production

Unit-4

Introduction to Keying techniques: Green and Blue screen process – Keying tools – Color suppression and Alpha brushes - Light Warping – BG preparation and production techniques- Green / Blue shooting Techniques

Unit-5

Preparing Clean plates and tracking plates – Brush setting and flow control – Cloning techniques – Noise and grain management – Log to Lin conversions.

Reference

1. Adobe Creative Team, Adobe After Effects CS6 Classroom in a Book, Adobe Press, 2012
2. Chris Meyer & Trish Meyer, Creating Motion Graphics with After Effects: Essential & Advanced Techniques, 5th Edition, Version CS5, Focal Press, 2010
3. Mark Christiansen, Adobe After Effects CS6 Visual Effects and Compositing Studio Techniques, Adobe Press, 2012

ELECTIVE II LIGHTING AND RENDERING

Unit-1

Types of lights and their usage - Lighting decay - Diffuse and Specular - Light properties - Linking and Unlinking Lights - Creating Spot Light Effects - Creating Point Light Effects - Using Light Fog and Light Glow - Shadows - Adding depth map shadows to a scene - - Creating area light shadows - Adjusting attributes of depth map shadows - Shadow map overrides -Creating retraced shadows - Adding softness to retraced shadows - Shadowing with different elements

Unit-2

Using Global Illumination (GI) to generate light on surrounding - Generating Photon Maps using GI - Adding Final Gather to a scene - Adding Color Bleed to make more sense - Final Gathering are also consider as indirect lighting - Re-use Final Gathering maps - Assigning Shaders using Lights - Generating final gathering maps for Animation - Mixing both Global Illumination and Final Gather

Unit-3

Global Illumination - Caustics and Regular Photons - Caustics-Caustics and its Transparency Shadows - High Dynamic Range Image (HDRI)-Image based Lighting Techniques using HDRI - Object Based Lighting (OBL) HDRI - Environments are used -Solving problems and issues generated by HDRI- Adding Mental ray Light and Lens Shaders – Enabling Physical Sun and Sky settings -Adding Physical Light Shaders.

Unit- 4

Introduction Render Layers – Introduction to Hyper Shade - Creation Render layer - Settings and Overviews of Layers and its Passes - Render Setting - Render Layers - Render Passes - File Texture Mapping - Materials and Shaders - UV Mapping – Planar Mapping – Cylindrical Mapping – Spherical Mapping – Automatic Mapping – UV Projections and Camera Projections - Creating and Associating Render Passes - Using Render Tokens - Contribution Maps.

Unit-5

Building Light-Centric Contribution Maps - Mental Ray and Render Pass Attributes - Render Passes with Mental Ray Materials - Capturing Photon Data -Render Passes - Rendering a Multi-Channel - Frame Buffer Contribution - Materials and Shaders in Render Passes - Using Older Mental Ray Materials with Render Passes - Using Sub Surface Scattering (SSS) Shaders Together With Render Passes - Exporting Files for Compositing with Layers and Passes Together - Export Pre-Compositing - Using Render Layers and Render Passes Together

References

1. Todd Palamar and Eric Kelle, Mastering Autodesk Maya 2012, Sybex, 2011
2. Dariush Derakhshani, Introducing Autodesk Maya 2012 (Autodesk Official Training Guides), Sybex, 2011
3. Lee Lanier, Maya Studio Projects Texturing and Lighting, Sybex, 2011
4. Todd Palamar and Eric Kelle, Mastering Autodesk Maya 2012, Sybex, 2011
5. Dariush Derakhshani, Introducing Autodesk Maya 2012 (Autodesk Official Training Guides), Sybex, 2011
6. Lee Lanier, Maya Studio Projects Texturing and Lighting, Sybex, 2011

ELECTIVE – III ADVANCED VISUAL EFFECTS

Unit-1

Interface - The Work flow – The Interface and different view ports - Node Behavior - Toolbar - Creating different type of node tree structure – Node indicator – Properties panels - Edit multiple node - Work with time line controls - Understanding channel – selecting mask – tracing channel – merging image

Unit-2

Rotoscopy Method - Bezier Node Drawing, node keys, node merging, node mastering - Introduction to Rotoscopy - Camera with character movement - Keying Method - Principle of keying method- Keying different method using IBK Gizmo and Image Based Keyer (IBK) color - Clean plate using IBK Gizmo and IBK color - Keying using Pre matte - Keying using key light - Using keyer and difference

Unit-3

2D to 3D conversion – Roto shape creating fallow focus depth - Tracking method - One point tracking method - Four point tracking method - Fixing the problems - Manual tracking methods - Rig removal method - clone method -Object removal using different method - Stabilizing the footage - Manual Cropping footage - Color grading and color correction -

Unit-4

Creating 3D environment Lights – Using High Dynamic Range Imaging (HDRI) image creating lights - wire removal methods - Camera Projection Techniques - Creating the multiple cameras setup using nuke - Creating Planar Projection method -Spherical Projection method - Creating cylindrical projection -Adding axis node -Object and image Projection

Unit-5

Apply texture to the planner - Matching the lights - Rendering sequence – 3D setup for visual effects software - Reading Geometrical node menu -3D Camera attributes - Scan line Render and View Geometry-Add lights Scene element - Multiple Cameras controls and attributes - Rendering different cameras - Animation and Shader - Shader Attributes - Nodes - Types of Material Node -Texture Node-Creating Displacement Node-Environment Light-3D Project Node - Tree Branches - Match Moving Concept - Using Live Footage Multiple 2D Tracking – 3D Solving - Creating Gold Track Point - Testing Rough Geometry -Creating Manual 2D Tracks - Adjusting Manual Track Points - Exporting Track Point to 3D Application - Matching Object

Reference

1. Steve Wright, Compositing Visual Effects: Essentials for the Aspiring Artist , Focal Press , 2007
2. Ron Brinkmann, The Art and Science of Digital Compositing , Morgan Kaufmann; First edition, 1999Todd Palamar, v, Sybex, 2009

ELECTIVE – III RIGGING

Unit-1

Quadruped rigging –Creating joints – mirror joint – NEW METHOD OF Setting Limitation to IK handle -- Front Leg Joint Creation -- Grouping the Master and hips control -- Creating Ear Joints -- Rib Bone Creation -- Creation of Tail and Trunk using IK_Spline handle Tool – Organising with Control Group – Curve Control Creations – Body Control Curve Creation -- Bridging Curve Control to Joints -- parent constraint – Bridging Trunk and Tail Creation -- Skinning – smooth binding a skeleton – Painting skin weights - mirroring smooth skin weights.

Unit-2

Biped rigging – Name the bones -- Naming the hierarchy in short way -- The spine -- The arm -- Orienting the joints -- The legs -- The Spine -- Finishing the body -- Mirroring the joints -- Reverse Foot Lock -- The Shortest method of Reverse foot (Ik-System) -- Building the IK -- Creating the CURVE controllers -- Adding custom attributes -- Pole Vector -- Building the FK (forward kinematics) -- FK Leg Controller

Unit-3

The Hand -- The Fingers (set driven connections) -- Curl -- Set a key -- The Head -- IK to FK Switching Process -- Connecting the Switch Attribute -- FK System -- IK - FK Controls Visibility -- Duplication for Right sided Leg creation -- The Spine -- Advance Spine Control using expression

Unit-4

The Arms -- Ik / Fk Switching Process -- IK-FK Arm Creations -- Check the naming and rotation order of each joint as follows -- Removing the Unwanted Joints -- Adding Joints to Layers – Bridging the Ik & Fk to real joints -- Arm Fk Setup Process -- Curve Control on Joints Axis setup -- Bridging Connection for the Ctrl Curves to FK Joints – Ik Setup Process – Arm Pole Vector Constraining -- Set Driven key for Bridging – Reversing the Process – Working with IK / FK Switch Porcess

Unit-5

Intro to Facial Rigging – Get to Know Face – Best Model work Flow for Face -- Blend Shape – Modeling for movement – Head Skeletal Setup – Placing the Head and Neck Joints -- Weighting the Head – Creating control objects for Head – Briding control joints for Head – Mirroring the head weights – Rigging the Tounge – Fixing cavity surface with Face Rig – Creating Mouth shapes and Expressions – Mirroring the Half shape Process – Creating the Facial GUI

Reference

1. 3D for Graphic Designers by Ellery Connell (Author) edition, Sybex; 1 edition (August 9, 2011)
2. Introducing Autodesk Maya 2013 (Autodesk Official Training Guides) by Dariush Derakhshani, Sybex; 1 edition (May 1, 2012)
3. Mastering Autodesk Maya 2012, by Todd Palamar (Author), Sybex; 1 edition (August 2, 2011)
4. How to Cheat in Maya 2013: Tools and Techniques for Character Animation by Eric Luhta (Author), Focal Press; 1 edition (September 9, 2012)
5. Maya Studio Projects Texturing and Lighting (Wiley Desktop Editions) by Lee Lanier (Author), Sybex; 1 edition (May 31, 2011)

**PORTFOLIO DEVELOPMENT
(PROJECT AND VIVA-VOCE)**

3D ANIMATION

Unit-1

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

Unit-2

Previewing animation – ghosting – types of ghosting – global preferences – frames to display – steps before current frame – step size – frame range – Animation snapshot and animated sweep – animated sweep – path animation – front axis –up axis – flow path object – blend shapes

Unit-3

Non linear animation – deformations – nonlinear deformer – bend deformer – resetting settings – merge –Sine deformation – low bound – high bound – amplitude – wavelength – dropoff – offset – using the wave deformer – Animation workspace – Tail ball – Planning and Thumb nailing – Key poses – Break Downs - go to start frame

Unit-4

Go to end frame – using graph editor – specifying stepped tangents – Thumbnailing - Blocking – specifying values in the channel box – setting a key – previewing animation – adjusting the y translate – Leg ball Animation walk

Unit-5

Creating biped walk – creating run – creating a jumping animation – Select curve object option – using Tangents - Spline – using the graph editor or dope sheet - using non linear animation – create character set – trax editor – visor – offset the character – using locator

Reference

1. 3D for Graphic Designers by Ellery Connell (Author) edition, Sybex; 1 edition (August 9, 2011)
2. Introducing Autodesk Maya 2013 (Autodesk Official Training Guides) by Dariush Derakhshani, Sybex; 1 edition (May 1, 2012)
3. Mastering Autodesk Maya 2012, by Todd Palamar (Author), Sybex; 1 edition (August 2, 2011)
4. How to Cheat in Maya 2013: Tools and Techniques for Character Animation by Eric Luhta (Author), Focal Press; 1 edition (September 9, 2012)
5. Maya Studio Projects Texturing and Lighting (Wiley Desktop Editions) by Lee Lanier (Author), Sybex; 1 edition (May 31, 2011)