

APPENDIX I

SYLLABI FOR THE VARIOUS COURSES UNDER THE PROGRAM

SYLLABI FOR THE COURSES UNDER

B.Sc. (Media Graphics and Animation) FIRST YEAR

BMG101: Introduction to Computers & Internet

Unit 1

Introduction to Computers: What is a Computer? Some Beginning Terms, What Makes Computer Powerful, Speed, Reliability, Storage, Diligence, Versatility, Power of Remembering, No IQ, No Feeling, History of Computer, Calculating Machines, Napier's Bones, Slide Rule, Pascal's Adding and Subtraction Machine; Leibniz's Multiplication and Dividing Machine, Babbage's Analytical Engine, Mechanical and Electrical Calculator, Modern Electronic Calculator, Computer Generations, First Generation Computers, Second Generation Computers, Third Generation Computers, Fourth Generation

Computers, Fifth Generation Computer, Types of Computers, Personal or Micro, Descriptions of Personal Computers, Main Frame, Supercomputers Server, Minicomputer.

Unit 2

Computer Organisation: Introduction, Basic Computer Operations, Input, Storage, Processing, Output, Control, Functional Units, Arithmetic Logical Unit (Alu), Control Unit (Cu), Central Processing Unit (CPU), Memory System in a Computer, Capacity of Primary Memory, Random Access Memory (Ram),

Read Only Memory (Rom), Prom, Eprom, Cache Memory, Registers, Secondary Storage, Magnetic Tape, Magnetic Disk, Optical Disk.

Unit 3

Software Application: Word processing, Create, Format, Print, Desktop publishing, Levels of Software, Spreadsheet, Database, Types of databases, Relational Database, Queries, Graphics Programs, Paint, Drawing Programs, Animation and Video Programs, Presentation, Programs, Communication Programs, FTP (File-Transfer Protocol). Chat, Instant, Messaging, HTML Editor, Project Management Program Integrated Software.

Unit 4

Input to Computers: Types of Input, Keyboard, Mouse, Trackball, Glide-pad, Game Devices, Pen, Touch-screen, Digitizers and Graphic Table, Point-of-sale Terminal (POS), Multimedia, Sound Input, Voice Input, Video Input, Data Automation, General Devices, OCR Software, Checking for Accuracy.

Unit 5

Data Processing: Processing is the Thinking, Processing, Digital Data, Digital Codes, Unicode, Parity, Machine Cycle, Speed, Memory Addresses, Update, Processor Speed, Physical Components, Microprocessor, ROM (Read Only Memory), Memory Devices, Memory Speed, Motherboard, ISA Slots, PCI Slots, Connectors, Memory Slots, Keyboard Plug, Power Connections, Processor Socket.

Unit 6

Output Devices: Types of Output, Categories of Output, Printer Features, how fast?, what Print quality?, what Printer will Print?, Cable Connection, Serial Cable, Parallel Cable, USB Cable, Types of Printers, Impact Printers, Types of Impact Printers, Non-Impact Printers, Types of Non-Impact Printers, Screen, LCD screen, Screen Features, Type of Screens.

Unit 7

Data Storage: Data Storage, Magnetic Disk, Types of Magnetic Disks, Disk Format, Tracks, Sectors, Clusters, Cylinders, Disk Capacity, Accessing Data, Magnetic Tape, Types of Tape, Tape Formats, Optical Disks, Advantages of Optical Disks, Disadvantages of Optical Disks, Care of Optical Disks (CDs, DVDs), Recording.

Unit 8

Internet Basks: What is the Internet?, Interoperable, Packet Switched, Data, Network, TCP/IP, e-mail, FTP, www, Gopher, Internet History, IP Address, Domain Name, Gateway, Repeater, Bridge, Router, Packet, Firewall Ethernet, WWW, Search Engine, URL, Home Page, Portal.

Unit 9

Internet Study: Introduction, Web Directories, Comprehensive Directories, Yahoo, Argus Clearinghouse Infoseek/Go Guide, Topical Directories, Search Engines, Crawlers, and Spiders, Alta Vista, Excite, HotBot, Lycos, Web Crawler, Meta-search Engines, Profusion. Search, Go2Net/MetaCrawie'r SavvySearch, Portals, My Yahoo!, Smap.com, Search Strategies, AND, OR, NOT, Using the Wild Card, Beyond the Basics: Thinking Critically About Web Sites, Decoding Web Site Addresses, Evaluation of Information-Sources, How to Be Net Savvy. **Unit 10**

Microsoft Word Xp 2003 Or 2002: Microsoft Word 2003/2002 for Windows, The Title Bar, The Menu Bar, The Ruler, Document View, Word 2002, Text Area, Exiting Word, Things You Need to Know, Click, Options, Word 2002.

Nonprinting Characters, Recently Used File List, Setting Options, Highlighting Text, Highlighting Menu Items, Placing the Cursor Microsoft Word Basic Features, Typing and Using the Backspace Key, Inserting Text, Overtyping, Bold, Underline, and Italicize, Save File, More Basic Features, Open File, Cut and Paste, AutoText, Spell Check, Find and Replace, Font Size, Fonts, Save File, Working with Paragraphs, Sample Paragraphs, Space Before and Space,

After, Line Spacing, Alignment, Hanging Indent Tab Key, Bulking, Numbering, Undo, Redo, and Printing, The Tab Key, Bullets and Numbering, Undo, &

Redo, Selecting Accounting Software, Tables, Creating a Table, Moving; Around a Table, Selecting a Row and Bolding the Text, Right Aligning Text, Adding a New Row to the End of the Table, Adding a Row Within the Table, Resizing the Columns, Adding a New Column to a Table, Sorting a Table, The Sum Function, Deleting a Column, Merge Cell, Table Headings Converting Text to a Table, Splitting a Table, Table AutoFormat

BMG 102: Drawing and Sketching

UNIT 1: Introduction to Drawing

How to Draw, How to Choose a Pencil, How to Improve Your, Drawing Skills, How to Ink a Drawing, How to Sketch.

UNIT 2: Drawing Shapes and Forms

Draw a Box, Draw a Circle, Draw a cylinder, Draw a Hexagon, Draw a Perfect Pentagon, Draw a Octagonal Based Pyramid, Draw a Cartoon Car, Draw a Simple House

Unit 3: Drawing Text and Lettering

How to Draw 3D Block Letters, How to Draw Bubble Letters, How to Make an Ambigram, How to Have Beautiful Writing , How to Improve Your Calligraphy Writing, How to Design a Logo

Unit 4: Drawing Realistic and Cartoon Characters

How to Draw Basic Human Figures, Hoe to Draw a Body , How to Draw People, How to Draw Realistic People, How to Draw Human Faces, How to Draw a Cartoon Man, How to Draw a Funny Looking Face, How to Draw a Simpsons Character

Unit 5: Drawing Animals

How to Draw Realistic Animals with Depth, How to Draw an Elephant, Draw a Horse, How to Draw a Bird, Hoe to Draw a Cat, How to Draw a Dog, How to Draw a Pig, How to Draw a Dog Face, How to Draw a Frog

Unit 6: Cartoon and Comic Drawing

How to Draw a Cartoon like Face, How to Draw Bobble Men ,
How to Draw a Cartoon Cat, How to Draw a Cute Cartoon Person, How to Draw a Cartoon Monkey, How to Draw a Stick Figure, How to Draw Monsters, How to Draw a Sea Creature

Unit 7: Perspective Drawing

One Point Perspective, Two Point Perspective

BMG 103: Colour Theory and Typography

Unit-1

Color Theory: Overview: Color Balance, Color Balance and Chromatic Colors, A Color Scheme, Traditional Color Theory, Historical Background, Color Harmony and Color Meaning, Emotional Response to Color, Physiological Principles for the Effective Use of Color, Lens, Retina, Brain, Color Blindness, Guidelines

Unit-2

Color Basics: Color Basics, Color Systems Working with Systems, Color Wheel, Color Relationships, Complementary Colors, Perceptual Opposites, Color Combinations, Color and Contrast, Itten's Color Contrasts, Proportion and Intensity, Contrast and Dominance, Color Shade and Tints, Color Studies Colors of a Complementary Relationship

Unit-3

Color Harmony: Some Formulas for Color Harmony, A Color Scheme Based on Analogous Colors, A Color Scheme Based on Complementary Colors, A Color Scheme Based on Nature, Color Context, Different Readings of the Same Color, Classic Color Schemes, Monochromatic Color Scheme, Analogous Color Scheme, Complementary Color Scheme, Split Complementary Color Scheme, Triadic Color Scheme, Tetradic (Double Complementary) Color Scheme

Unit-4

Color Meanings: Color Meanings and Colors that go Together, Cool Colors, The Colors of Excitement, Mixed Warm and Cool Colors, Neutral Colors, More about Color

Unit-5

Color Model: Light, CIE Chromaticity Diagram, RGB Color Model, CMY Color Model, Hue, Saturation, and Value Color Model, Intuitive Color Concepts

Unit-6

Psychology of Color: Introductions, Utilizing Psychological Effects in Painting, How to Judge Your Color Selection, Characteristic Color Combinations, Color in Photography Versus Color in Painting, Colors in Painting Versus Colors in a Room

Typography

Unit-7

Type Technology: History and Emergence

Type Technology-The Four Revolutions, Type Forms Through the Centuries, Decorative & Display Type, Synthesis.

Typography

Introduction to Typography, Design, Basic Type Anatomy, Major Typeface Classifications, Letter spacing, Type Measurement, Font-Type Definitions, Typographic Terms, When Choosing Typefaces do.

Typographic Design Consideration

Measure the Measure, Hanging Punctuation, Ligatures, Typographic Hierarchy – Size, Typographic Hierarchy - Weight.

In-Design Tutorial for Typographic Designs

Tutorial #1: Simple Type Exercise, Tutorial #2: Simple Formatting, Tutorial #3: Simple Table, Tutorial #4: Complex Formatting, Tutorial #5: Graphic Creation.

Copy Preparation, Design and Layout

Copy Preparation, The Printers' Point System, Principles of Design, Margins, Layouts for DTP & Printing, Type Faces, Classification of Types, Type Setting, Proof Reading.

File and Font Formats

File Formats, File Format Extensions, Font Formats, Font Format Extensions.

BMG 105: Computer Graphics – Part I: Adobe Photoshop

Introduction: What is Photoshop?, The RGB Color Space, Digital Image Types: Vectors and Bitmaps, Internet Image Standards.

Photoshop Workplace: The Workplace, The Photoshop Workspace, Preferences, ImageReady.

Creating Images: Creating New Images, Contents, Image Window, Scanning Images into Photoshop,

Importing Existing Images into Photoshop, Magnification/ Navigation Controls, The History Palette, The Snapshot. **Creating and Using Selections:** Selections and

Channels, Multiple Selections, Modifying Selections, The Info Palette, Moving Selections, Selection Tool Options, Creating Selections in Quick Mask Mode.

Photoshop's Layer: Layers, Using Layers, Creating New Layers, Text and Layers, Layer Styles, Managing Layers.

Editing Images: Using the Painting and Drawing Tools, Pattern Stamp Tool, Gradient Tool, Using the Type Tool, The Character Palette, The Paragraph Palette, Fine- Tuning Filters with Fade, Curves, Adjustment and Fill Layers.

Editing Vector Shapes: Working with Vector Content, Creating a Selection from a Path, The Shape Tools, Combination Options, Generic Shape Tool Options, Layer Style.

Creating Static Image: Creating a Logo in Photoshop, Preparing the Logo for the Internet, Save for Web, Creating a Custom Logo.

BMG 106: Computer Graphics Part-II: Adobe Illustrator-

Unit 1

Understanding Illustrator: Understand Illustrator's Role in the World of Digital Graphics, Get Your Hands Around Illustrator's Curves, Understand Paths, Anchor Points, and Fills, Use Illustrator with Other Programs, Get Around in Illustrator, Open a File, Use the Window Menu to Organize Views, Work with Palettes, Use Illustrator's Toolbox, Tools in Illustrator, Default Displayed Tools, Tearoffs, Pan Tools, Line Segment Tools, Rotate Tools, Warp Tools, Sprayer Tools, Eyedropper Tools, Hand Tools, Direct Selection Tools, Type Tools, Shape Tools, Scale Tools, Pencil Tools, Graph Tools, Blend Tools, Scissors Tools, Fills and Views

Unit 2

Creating Documents: Set Up a New Document, Customize Preferences, Set Default File & Clipboard Settings, Navigate Your Page

Unit 3

Draw with the Pencil and Brush Tools: Draw with the Pencil Tool, Edit Anchor Points with the Direct Selection Tool, Define Caps and Joins, Assign Stroke or Fill Colors with the Eyedropper or Paint Bucket Tool

Unit 4

Draw with the Pen Tool: Pen Tool, Create and Edit Smooth Anchor Points, Draw Wave Forms, Manipulate Control Points, Edit with the Pen Tool, Manage Paths.

Unit 5

Work with Shapes: Shapes, Draw Ellipses and Circles, Draw Polygons and Stars, Flare Tool, Pathfinder Tools, Use Shape Modes

Unit 6

Scale, Skew, and Rotate: Scale, Skew, and Rotate, View a Bounding Box, Resize and Reshape with a Bounding Box, Rotate and Flip with a Bounding Box, Use More Transform Tools

Unit 7

Text Formatting: Format Characters, Define Stroke and Fill for Type, Format Paragraphs, Align Paragraphs, Display Hidden Characters, Set Tabs, Define Type Styles, Convert Text to Outlines

Unit 8

Import Artwork: Import Art, Choose Between Importing and Linking, Trace Imported Bitmaps, Organize Bitmaps with the Links Palette

Unit 9

Filters and Effects: Applying Effects, Two Types of Effects, Path-Bending Effects, Convert To Shape Effects, Path Effects, Pathfinder Effects, Rasterize Effects, SVG Filter Effects, Warp Effects, Exploring Fill Effects, Applying Filters, Applying a Gradient Mesh

BMG 107: Technical and Creative Writing-

Essential Grammar: Basic Sentence Patterns, Basic Parts of the Sentence, Parts of Speech, Phrases and Clauses

Business Correspondence and Application Letters: Common Types of Application Letters, Common Sections in Application Letters, Background Details in the Application Letter, Checklist of Common Problems in Application Letters, Complaint and Adjustment Letters, Inquiry Letters: Types and Contexts

Book Design: Introduction, Front and Back Covers, Title Page, Edition Notice, Disclaimers, Trademarks, Warranties, Safety Notices, Communication Statements, Table of Contents—List of Figures, Preface, Body Chapters, Appendixes, Glossary, Index, Reader-Response Form, Book Design and Layout, Page Design, Headings, Lists, Notices, Tables, Highlighting, Margins, Indentation & Alignment, Fonts & Colour, Graphics and Tables, Graphics an Overview, Drawings, Diagrams, Photos, Uses of Illustrations and Photos, Formatting Requirements, Producing Illustrations, Photographs, Tables, Uses for Tables, Table Format, Producing Tables, Charts and Graphs, Producing Charts and Graphs, Documenting Graphics Indicating Sources, General Guidelines for Graphics—a Review

Technical Writing: About the Technical Report—Types of Technical Reports, Audience and Situation in Technical Reports, Topics for Technical Reports, General Characteristics of Technical Reports, Checklist for the Technical Report, More Technical Report, Technical Background Reports, Primary Research Reports, Business Plans, Technical Specifications

Creative Writing: Choose the Right Story Structure, Types of Structures, Narrative Structures, Structural Devices, Structural Issues, Choose the Right Way to Tell Your Story, Consider Multi- Media

Creative Writing Process: Introduction, Idea Collection Sheets, Categorizing Ideas, Converting to Mind Map Form, Conversion to Linear Form

BMG 108: Introduction to Multimedia and Its Applications-

Unit-1

Introduction to Multimedia Systems: History of Multimedia Systems, What is Multimedia? Challenges for Multimedia Systems, Desirable Features for a Multimedia System, Components of a Multimedia System, Applications, Trends in Multimedia.

Unit-2

Multimedia Systems and Applications: Categorization of Multimedia, Major Characteristics of Multimedia, Terminology, Usage, Structuring Information in a Multimedia Form.

Unit-3

Computer Graphics: Computer Graphics, Bitmap Images, Vector Graphics, Graphics Software, Graphics File Format. **Unit-4**

Computer Animation: Introduction, Early Animation Techniques, Innovations of Animators at Disney, Types of Animation, Software for Animation, Difference Between Traditional Animation and Computer Animation, Pixar and Disney Studio.

Unit-5

Interactive Media: Introduction, Terminology, World Wide Web, Internet Forums, Computer Games, Mobile Telephony, Interactive Television, Hypermedia.

Unit-6

Multimedia Hardware: Multimedia Computers, Input Devices, Output Devices, End User Hardware Issues, Storage, Buses.

Unit-7

Multimedia in Education: Introduction, Terminology, Education Online, The Problem is the Solution, A Vision for the Future, Conclusion.

Unit-8

Multimedia and Virtual Reality: Introduction to Multimedia and Virtual Reality, Technological Issues, Computer Science Aspects, User Interface, Interaction with Geographic Information, Applications, Potential.

Unit-9

Multimedia: Application and Future: Multimedia, Applications For Multimedia, Multimedia in the Future.

BMG 109: Developing Presentations

Unit 1

Delivering Presentation: Analyzing an Audience, Avoiding Common Pitfalls Made by Presenters, Bad Delivery Habits, Don't Go Blank During Your Presentation, Eliminating Filler Words and Actions, Giving Your First Public Presentation, Integrating Movement in Presentations, Making Eye Contact with Your Audience, Overcoming Your Fear of Presenting,, Planning Breaks During Presentations, Presenting to Different Types of Audiences, Tips for Keeping Your Presentation Interesting

Unit 2

Visual Presentation: The Basics of File Compression, Capturing Bitmaps at the Correct Resolution for Projection, Choosing the Right Colors for Your Next Presentation, Fonts and PowerPoint: True Type vs. PostScript, Graphic Types and Electronic Presentations, Quick Tips for Effective Visuals, Using Different Backgrounds within a Single Presentation, Tips for Converting Multimedia Presentations to HTML, Using Different Backgrounds within a Single Presentation, Using Flipcharts Well

Unit 3

Knowing Projectors: Connecting Laptops to Projectors, Connecting PowerBooks to Projectors, Projector Cables 101, Connecting Projectors to Public Address Systems or External Speakers, Connecting Projectors to Video Devices, Setting Up Projectors and Determining Correct Image Size

Unit 4

Introduction: Introduction: PowerPoint, Capabilities of PowerPoint

Unit 5

PowerPoint Image Basics: PowerPoint Image Basics Formats Inserting Pictures Onto Slides Changing the Image's Properties, Adding labels to your slide pictures Image's effect on PowerPoint file size

Unit 6

Making PowerPoint Slides: Making PowerPoint Slides and Navigating them. Using the "Outline View in PowerPoint", Changing Slide Properties in PowerPoint, Changing the Order of your PowerPoint Slides

Unit 7

Entering Text On A PowerPoint Slide: Entering Text on a PowerPoint Slide, Changing Text and Font Properties, Copying and Pasting into PowerPoint, Format Paragraphs in PowerPoint, Bullets and Numbers on your Slides, Spell- Checking your PowerPoint show, Adding Notes to your PowerPoint Slides **Unit 8**

Viewing Your PowerPoint Show: Show Options and "Doodling" Onscreen, Printing PowerPoint Notes and Handouts

BMG 110: Design Principles-

Unit-1

The Principles of Universal Design: Universal design, principle one: Equitable use, principle two: flexibility in use, principle three: simple and intuitive use, principle four: perceptible information, principle five: tolerance for error, principle six: low physical effort, principle seven: size and space for approach and use.

Unit-2

Principles of Good GUI Design: Give users control, GUI successes, understand people, designs for clarity, designs for consistency, watch the presentation model, control design, applying design principles, implementing effective standards.

Unit-3

Composition and Design: Visual elements (art elements), some design principles, visual effects, principles of art and composition.

Unit-4

Creative Thinking Techniques: Basic guidelines for brainstorming, practical methodology, variations, idea generating questions, the journalistic six, historical examination, block busting techniques, checklists.

Unit-5

Teaching Creativity: Impact of freedom on creativity, imitation in creative process, imitation and skills, ways to generate creative ideas, skills for a prerequisite to thinking and creativity, creativity drawing, and talent, drawing and creativity, self assessment as creative teaching.

Unit-6

Design Methods: Background of design methods, formalization of design methods, design management, proliferation of information technologies, significance of proliferation of information technologies, design planning.

BMG 111: Print Media–I: CorelDraw

Object Overview: Object Overview, Pick Tool Overview, Shape Tool Overview, Zoom Tool Overview, Freehand Tool Overview, Rectangle Tool Overview, Ellipse Tool Overview, Spiral Tool Overview, Polygon Tool Overview, Graph Paper Tool Overview.

Tools: Selecting Objects, Align Objects, Distribute Object Sets, Group and Ungroup Objects, Modify Multiple Objects, Copy Object Properties, Using Guidelines, Undo/Redo/Revert Commands, Changing Object Order, Cut or Copy an Object.

Pattern Fill: Pattern Fill Overview, Using Preset Full Color Fills, Loading Full Color Fills, Using Bitmap Pattern Fills, Load External Bitmap Fills, Using Pattern Fill Options.

Fill Tool: Fill Tool Overview, Creating Solid Fills, Fountain Fill Overview, Creating Linear Fountain Fills, Creating Radial Fountain Fills, Creating Conical Fountain Fills, Creating Square Fountain Fills, Creating Custom Fountain Fills.

Text Tool: Text Tool Overview, Create Artistic Text, Create Paragraph Text, Change Font, Set Default Font and Size, Align Artistic Text, Align Paragraph Text. **Vectors and Bitmaps:** Vectors and Bitmaps, Set View, Work in Wire frame View, Hints for Learning CorelDraw, Menu Overview: Part 1, Menu Overview: Part 2, Dockers Overview.

Import/Export Overview: Import/Export Overview, Import a File, Edit Vector Import, Edit Bitmap Import, Export a File, Export GIF File, Export JPG File, Export AI File, Export CDR File

BMG 112: Print Media Part-II: QuarkXPress

Unit-1

Introduction: Introduction, Basic Objects - Boxes and Lines, Object Shape, Outline and Colour Properties, Tools and References

Unit-2

Setting Up Quarkxpress References: Part One: Setting up Application Preferences; Edit > References > Application.

Unit-3

Setting Up Quarkxpress References: Part Two: Edit > Preferences > Document, “General” tab, Paragraph tab, Character tab, Total tab and Trapping tab, Creating Setting Up QuarkXPress™ Tool Defaults - Part One, Creating Setting Up QuarkXPress™ Tool Defaults - Part Two, Setting up the Colour Palette.

Unit-4

Images with Embedded Clipping Paths in Quarkxpress: Clipping Paths.

Unit-5

Working with Master Pages in Quarkxpress: Master Pages, Changing Master Page Objects to Document Page Objects, How to Change the Margins.

Unit-6

Recovering from and Preventing Data Loss In Quark: Enable Auto Backups, Save Often, Make Laser Printouts, Data Recovery - Step by Step, Corrupted Image, Corrupted QuarkXPress Document File, Test Your Backups.

Unit-7

Appending H & JS in Quarkxpress: Hyphenation and Justification, Tips for Fast Working.

Unit-8

Creating Stroked Text in Quarkxpress: Introduction, Using Adobe Illustrator to Create the Effect, Using Quarkxpress to Create and Effect.

Unit-9

Working with EPS Files in Quarkxpress and Photoshop© - Part One: Introduction, Working with EPS Files.

SECOND YEAR

BMG 201: Introduction to Web Development

Web Development Process: Software to Create Your Website, What Makes a Good Website?, How to Plan Your Website, Design and Layout, Create Your Web Pages, How to Put Your Site on the Net

Site Design: Organizing Information, Site Structure, Site Design Themes

Images: Introduction, Use Images Purposefully, Do Not Use Graphic Text, Avoid Animated Images, Provide Alt-Text for All Relevant Images, Provide Blank Alt-Text for Irrelevant or Redundant Images, Maintain a Catalog of Image Content, Keep Image Dimensions As Small As Possible, Use Thumbnails for Large Images

Web Design Issues: Introduction, Web Site Design, Issues, Accessible Web Design, Website Planning

The Basics Of Navigation: Introduction, Site Navigation, Types of Navigation, Styles of Navigation, Net Objects, Web site Navigation Tips

Web Type: Type Matters, Type on the Web, Free Fonts for the Screen, Facing Fonts, Graphic Text, Sending Fonts with Your Page, Line Lengths, "Special" Characters, Installing and Using Web Fonts

Client Server Architecture: Characteristics, Comparison to

Peer-to-Peer Architecture, Comparison to Client-Queue-Client Architecture, Advantages, Disadvantages

Introduction To E-Commerce: Business Strategy Introduction, Online Business, Types of Business Web, E-Commerce Infrastructure, The Future of the Business Web Future

Web Services: A Short Introduction to Web Services, Advantages and Disadvantages of Web Services, A Typical Web Service Invocation, Web Services Architecture, A Typical Web Service Invocation (Redux)

Web Advertising: Introduction, Successful Web Design Guidelines and Components, Web Advertising Strategies, Web Advertising vs. Traditional Advertising, Advantages and Disadvantages of Web Advertising, Effectiveness of Web Advertising

BMG 202: HTML

Unit 1

Introduction To HTML: HTML Introduction, Linear Media, Hypermedia, What is HTML Markup?, Document Structure, A Basic Document

Unit 2

Overview: Choosing a Text Editor, Starting Note Pad,' Creating a Basic Starting Document, Setting Document Properties, Color Codes, The BODY Element, Text Color, LINK, VLINK and ALINK, Using Image Backgrounds, Previewing Your Work/Save & View Cycle

Unit 3

Content Formatting: Headings, Paragraphs, Breaks and Horizontal Rules, Paragraph, <P> </P> Break,
, Horizontal Rule, <HR

Unit 4

Character Formatting: Character Formatting, Bold, Italic and other Character Formatting Elements , Alignment, Special Characters & .Symbols, Special Characters, Additional Character Formatting Elements

Unit 5

Lists: List Elements. UL: Unordered List., OL: Ordered-List, DL: Definition List, Nesting Lists

Unit 6

Images: Supported Image Formats, Limited Support or Non-Supported Image Formats, Inserting Images, Additional Image Attributes

Unit 7

Links: Link Elements, Link Types, URLs - Uniform Resource Locators, HTTP

-Hyper Text Transport Protocol, FTP - File Transfer Protocol,, News - News Groups, Gopher, E-mail - Electronic Mail, Telnet - Remote Terminal Emulation, internal-Links, 'Image Maps, Server-side Image Maps, Client-side Image Maps

Unit 8

Table: Introduction, Table Attributes, Table Caption, Table Header, Table Data and Table Header Attributes

Unit 9

Frames: Frames, Frame Page Architecture, Creating a Frames Page, Other Key Attributes of the FRAMESET Element, Compound FRAMESET Divisions, Targets, Special Targets

Unit 10

Forms: Forms, Form Elements, The Elements Used In Forms,. Common Gateway Interface (CGI), Intranet Application Development Architectures

Unit 11

Java: JAVA , <APPLET> , <PARAM>, JAVA Script

Unit 12

ActiveX Support: ActiveX Support, ID, Code Base, VBScript

Unit 13

Animated Pages: Uses of the Meta Element, Client Pull & Page Animation, Description, Keywords, Adding Sound to an HTML Page, Embed; BG Sound, Animation Elements, Marquee, Blink

Unit 14

Page Layout: Technical Design Considerations, Document Size vs. Download Time, Page Loading: HTTP 1.0 Differences with HTTP 1.1, Browser

Compatibility & Quirks, Page Layout Guidelines, Site Design 'Factors and Criteria, Site Layout and Navigation

Unit 15

Cascading Style Sheets: Introduction to Cascading Style Sheets, Inline Styles, Embedded Style Sheets, Linked Style Sheets, Classes, IDs,-DIV and SPAN ,. Cascading, and ' Inheritance

BMG 203: Computer Animation: Introduction to Flash

Unit-1

Introduction To Flash: What is Macromedia Flash MX 2004?, What's New in Flash MX 2004?, Using the Flash Interface, Creating a New Document, Changing Movie Properties, Flash Panels, Using the Movie Explorer.

Unit-2

Creating Graphics In Flash: Creating Graphics, Using Color Effectively, Layering Flash Elements, Masking Content, Organizing Content in Flash, Reusing Graphics as Symbols.

Unit-3

Using Text Effectively In Flash: Using Text Effectively, Using the Text Tool, Font Properties, Embedded versus Device Fonts, Anti-Aliasing Text, Creating Static, Input or Dynamic Text Fields, Using Components in Flash, Building Forms in Flash.

Unit-4

Flash Animation: Introduction to Flash Animation, Creating Motion Tweens, Creating Frame-by- Frame Animations, Using Motion Guide Layers, Creating Shape Tweens, Adding Timeline Effects.

Unit-5

Understanding Movie Clips: Using Nested Symbols, Using Movie Clip Events. Unit-6

Adding Sound And Video: Importing Sounds, Using Behaviors to Load Sounds, Adding Videos, Using the Flash Media Components.

Unit-7

Publishing Your Movie: Publishing Flash for Web Use, Evaluating Download Performance, Flash and HTML, Publishing Flash Movies for CD-ROMs.

Unit-8

Navigating A Movie: Creating Buttons, Adding Behaviors to Buttons, Creating Movie Clips, Dividing Files into Multiple SWFs.

BMG 204: Content Digitization

Unit-1

The Digitization Process: Introduction, What is Digitizing? Fit for Purpose, Compression, Pathways, Digital Objects, Data Models, Choosing Software.

Unit-2

Capturing Video in Movie Maker: Which Format to Choose? Improving Capture Performance in Movie Maker. The Correct Way to save Movie Maker Project Files, Editing within Movie Maker 2

Unit-3

Digital Sound: Introduction, Measuring Sound, Analog Audio, Digital Audio, Advantages of Digital Audio, File Size and Bandwidth, Compression.

Unit-4

Digital Video Capturing: Digital Video Recording, Digital Video Recorder (DVR), Process to Capture Analog Video to a PC Using a Video Capture Device, High Definition (HD) Options for Digital Video Recording (DVR), Sony's HD DVRS, High Definition TV and Video Capture Cards, TV Tuner/Video Capture Cards.

Unit-5

Digitization File Formats: Introduction, File Format Glossary, TIFF, JPEG, DJVU, PDF, WAV, MP3, Real Audio Ram, MPEG 21, Digitization File Formats, Images, Text, Dataset, Audio, Video.

Unit-6

Digitization – Scanning, OCR, and Re-Keying: Introduction, The Digitization Chain, Scanning and Image Capture, Image Capture and Oriented Character Recognition (OCR), Re-Keying.

Unit-7

Microform: History, Uses, Advantages, Disadvantages, Readers and Printers, Media Image Creation, Storage and Preservation, Duplication, Format Conversion, Digital Conversion.

Unit-8

Recommendations for the Digitization of Microfilm: Picture Qualities, Storage Form, Format, Compression, Software Requirements for Image Viewing, Hardware Requirements for Image Viewing, Long-Term Preservation of the Digital Conversion Form (Migration), Financial Visibility, Digitization and Optical Character Recognition.

Unit-9

GIS and Scanning Technology: Introduction, Working of a Scanner, Types of Scanners, General Feature of a Scanner, Types of Scanning, Processing of Scanned Document, Choice of Scanning or Digitization, Accuracy of Scanned Images, Scanning Products.

Unit-10

Digitization Projects Management: Introduction, Project Planning, Copyright Issues Associated with Digitizing Images, Determining the Costs of a Digitization Project, Standards and Guidelines to Consider, Selecting Equipment and Software for the Project, Workflow Process, Maintenance/Management, Quality Control, Migration of Data to New Formats, Storage, Backup and Preservation.

BMG 205: Content Authoring on Web Using Macromedia (Now Adobe) Dreamweaver

The Dreamweaver Workspace:

Overview of the Dreamweaver Workspce, Using the Insert Toolbar, Show or Hide Window and Panels, Customize the Document Toolbar

Creating Web Pages:

Create a New Web Page, Opening and Saving Web Pages, Closing Web Pages. Previewing Web Pages

Using Text:

Add Paragraphs and Headings, Align Paragraphs and Headings, Formatting Text, Insert Special Characters in Dreamweaver **Hyperlink:**

Introduction, Creating Hyperlinks, Using a Named Anchor to Link within a Document, Create an Email Link, Refersh the Page and Redirecting Users

Using Graphics:

Insert an Image, Cropping and Resizing Images, Adjusting Image Contrast and Brightness, Setting Image Properties, Adjust the Image's Size

Using HTML Tables:

Introduction, Inserting Tables, Selecting Table Elements, Formatting Tables and Cells, Importing Tabular Data, Using a Design Scheme to Format a Table, Setting Table Colors **Using Frames:**

Introduction, Creating Frames, Selection Frames, Saving Frames, Setting up Frames, Frame Content, Step by Step Exercise: Creating and Configuring Frames

Interactive Forms:

Introduction, The Structure of an Interactive Form, Creating Interactive Forms, Validating Interactive Forms, Step By Step Exercise Inserting Elements in an Interactive Form **Behaviors:**

Introduction, Inserting a Behavior, Show and Hide Layer Behavior, Using JavaScript Code. Step By Step: Inserting Behaviors

HTML and Dreamweaver:

Tags, Code Inspector, The Tag Hint List, Code Error, Find and Replace, Step By Step Exercise: Finding and Replacing

BMG 206: Developing Dynamic Web Pages Using Java and VB Scripts

Javascript Syntax: Origin of Syntax, Variables, Basic Data Types, Operators, Control Structures, Functions, Objects, Exceptions, Miscellaneous.,

Javascript and HTML: JavaScript and HTML, The Basics,- Dialogs, Variables, Arrays, Operators.

Control Flow: If Condition, Switch Case, For Loop, While Loop, Function, Object Oriented JavaScript Programming. **Java Script Methods:** Getting Information, String Manipulation.

Form: Form Handling, Button, Text, Text area, Other Input elements, Checkbox, Radio, Select, Form Validation.

Introduction to VB Script: What' is VBScript, Using VBScript with Internet Explorer, Using VBScript with Internet Information Services, Using VBScript with Windows Script Host, Using Visual Basic with Microsoft Access.

Variant Data Type, Subtypes, and Literals: "Variant"-

Data Type and Subtypes, Data Literals, Data Literal Examples, String Data Literals, Date and Time Data Literals.

Arithmetic Operations: Introduction of Arithmetic Operations, "+" - Arithmetic Addition Operation, "-" - Arithmetic Subtraction Operation, "*" - Arithmetic Multiplication Operation, "/" - Arithmetic Division Operation, "\" - Arithmetic Integer Division Operation, "Mod" - Arithmetic Modulus Operation, "A" - Arithmetic Exponentiation Operation, Introduction to Numeric Comparison Operations, Introduction to Logical Operations.

Variable Declaration and Assignment-Statement: Variable Declaration and "Dim" Statement, Assigning Values to Variables - "=" Statement, Empty - The Default Value of a Variable.

Array Data Type and Related Statements: Array, "Dim x()" - Declaring Array Variables, "x(i)" - Accessing Array -Elements with Indexes, "Dim x(n)" - Fixed-Size Array Example, "Dim xQ" - Dynamic-Size Array Example, "For Each" Statement Example, "Erase" Statement - Removing All Elements in an Array, Data Type "VariantO" - Array of Variant Values.

Conditional and Loop Statements: Conditional Statements, "If Statements, "If1 Statement Example's, "Select - Cjis^State^sn^ "For- ... Next" Statements, "For ... Next" Statement Example Examples, ."While" Statements, "While" "Statement Examples, "Do ... Loop" Statements. **"Function" and "Sub Procedures:** What Is a Procedure?, "Function" Statement and Function Call, Function Procedure Example, "Sub" Statement and Subroutine Call, Sub (Subroutine) Procedure Example, Passing Arguments to Procedures, - Passing Arrays as Arguments, Variable Scope in Procedures.

BMG 207: Video Production Basics-

Unit-1

Handling Video Camera: Introduction, Terminology, Planning, Camera Functions, Framing, Basic Camera Moves, Shooting Technique.

Unit-2

Video Camera Functions: Video Camera Focus, Video Camera Iris, Video Camera White Balance, Video Camera Viewfinder, Video Camera Shutter

Unit-3

Video Camera Tripods: Tripods, Choosing a tripod, Setting up a Camera Tripod, How to Use a Tripod, Monopods

Unit-4

CCU (Camera Control Unit) Operations: CCU (Camera Control Unit), How to Prepare a Tape for Editing, Making a Video Master Tape, Slow Motion Replays, Shooting a Fireworks Video

Unit-5

Video Chroma—Green Screen: Introduction, Planning the studio setting, Green screen material, Lighting the green screen, Using Green Screen Footage

Unit-6

Shooting Interviews: Shooting Interviews - Introduction, Interview Shots, Studio Interview Settings, Mobile Interviewing Techniques, Remote Interviews, Recording Sound for Interviews, Lighting Interviews, Editing Interviews, General Tips for Shooting Interviews

Unit-7

Streaming Video: Creating Streaming Video, Streaming Video Servers, Conversion Utilities, Exporting a File, Streaming formats

Unit-8

Introduction to Video Editing: Introduction to Video Editing, Editing Methods, Video Editing Terminology, Linear Editing (Tape-to-Tape), Assemble Editing, Non Linear (Digital) Editing, Editing Software, Video Transitions

Unit-9

Embedding Streaming Video in a Web Page: Introduction, Code for embedding a video file, Streaming Video Files with Quick time Streaming MPEG-4 Video Files, Streaming Video Using Flash,. Streaming Video with Flash Media Server, Flash Video; Progressive Download.

Unit-10

Video Formats: 8mm video format, The Beta/Betamax Format, DV Video Format,. HDTV-Format, The Flash Video Format, The MPEG Format, QuickTime, The VHS Format, Other Formats.

BMG 208: Storyboarding

Introduction to Storyboard

Introduction, Origins, Usage, Film, Business, Interactive media, Benefits, Creation.

Creating and Using Storyboards for CBT

Creating and Using Storyboards, What is a Storyboard?, Storyboards as Documentation, Basic Form, Question and Feedback Form, How to Create Storyboards?, Automated Storyboard Tools.

Storyboarding for Multimedia

Introduction, What is a Storyboard?, Advantages of Storyboarding, Interactive Storyboarding, Using Interactive Storyboarding to Speed-up the Content-writing Phase, Using Interactive Storyboarding to Speed-up Report Document Production, From Interactive Storyboard to Prototype: A Practical Example.

Interactive Storyboards

Key elements of a storyboard, Rationale, Learning outcomes, Assumed pre-knowledge, Screen layout, Additional resources, Useful user-interface techniques, Text, Graphics, Video, Pen & paper, Adding user interactivity, Experiments, Graph-plotting, Drag and drop, Equations and derivations, Self-assessment exercises, Common user-interface controls.

BMG 209: Visual Communication

Unit 1

Basic Visual Elements

Dot, Line, Shape, Direction, Understanding Texture, Hue, Saturation, Value, The Basic of Scale, Dimension, Motion. **Unit 2**

Oral and Visual Culture: A Dominant Form of Communication

Introduction, Power of Orality, Visual Communication, Visual and Oral Means of Communication.

Unit 3

Classical Philosophical Theories of Perception

Introduction, Directness and Indirectness, Realism and Idealism, Direct Realism, Indirect Realism, Direct Realism Revisited, Idealism.

Unit 4

Photographic Composition

Introduction, Photographic Composition, The Subject, The Frame, Angles, Balance.

Unit 5

Types of Photography

Aerial Photography, Astrophotography, Black & White Photography, Commercial Photography, Digiscoping, Event Photography, Forensic Photography, Large Format Photography, Kirlian Photography, Macro Photography, Up Close and Personal, Nature Photography, Wildlife Photography, Night Photography, Panoramic Photography, Pinhole Photography, Satellite Photography, Sports Photography, Travel Photography, Ultraviolet Photography, Reflected Ultraviolet Photography, UV Fluorescence Photography, Underwater Photography.

BMG 210: Audio Editing: Sound Forge

Unit I

Digital Audio: What is Sound?, Measuring Sound, Analog Audio, Digital Audio, Advantages of Digital Audio, File Size and Bandwidth, Compression

Unit II

Digital Audio Formats: Digital Audio Files, Streaming Audio, MPEG Audio, Non-MPEG Proprietary Formats

Unit III

Creating MP3 Files: Encoding, Bit-Rates, Constant Bit-rate Encoding, Variable Bit-rate Encoding, Selecting the Best Bit-rate, Verifying the Results

Unit IV

Editing Sound Files: Sound Editing Software, Normalization, Transitions Between Songs, Sound Editing Utilities

Unit V

Sound Editing With Audacity: Introduction to Editing, Cut, Copy and Paste, Silence, Duplicate and Split, Splitting and Sub Mixes

Unit VI

Audacity Menu: File Menu, Edit Menu, View Menu, Project Menu, Generate Menu, Internal Effects

Unit VII

Toolbar and Tracks: Main Toolbar, Slider Bar, Edit Toolbar, Audio tracks, Pop-Down Menu, Gain and Panning Controls

Unit VIII

Working On Sound Forge: Getting Started, The Toolbars, Saving a File, The Data Window (Sound File Window), Editing Your Sound, Playing a Sound, Basic Editing Operations, Effects and Processing, The Effects Menu, Applying Effect, The Process Menu, Applying a Process

BMG 211: Video-Editing Adobe Premiere-

Unit-1

Overview of Adobe Premier Pro: Introduction, Capabilities of Premier, Limitations of Premier, Cost, The adobe Premier Workspace, The Project Panel, The Monitor Panel, The timeline Panel, The Current Time Indicator, Other Common Panels in Premier.

Unit-2

Adobe Premier Tools: Adobe Premiere Tools Panel (toolbox), Adobe Premiere Selection Tool, Adobe Premiere Track Select Tool, Adobe Premiere Ripple Edit, Adobe Premiere Rolling Edit, Adobe Premiere Rate Stretch Tools, Adobe Premiere Razor Tool, Adobe Premiere Slip Edit, Adobe Premiere Slide Edit, Adobe Premiere Hand Tool, Adobe Premiere Zoom Tool.

Unit-3

Adobe Premiere Import and Export: Import Audio Files into Adobe Premiere, Import PSD Files into Adobe Premiere, Import Audio Files into Adobe Premiere, Importing MPEG files with AC3 Audio into Adobe Premiere, Exporting Video from Adobe Premiere Pro.

Unit-4

Audio: Synchronizing sound and Video in Adobe Premiere, Premiere Audio Mixer, Premiere—Master Meters Only, Audio Effects, Adobe Premiere Balance Effect, Adobe Premiere DeNoiser Effect, Adobe Premiere Dynamics Effect, Adobe Premiere Fill Left/Right Effects, Adobe Premiere Swap Channels Effect.

Unit-5

Titles in Adobe Premier Pro: Making Titles in Adobe Premiere Pro, Using the Premiere Title Designer, Importing Titles from Other Applications, Adding Titles to the Timeline, Premiere Title Templates.

Unit-6

Transitions in Adobe Premier: Transitions in Adobe Premiere, Transitions and handles, Adjusting the Transition Settings, Show Actual Sources, Using the Default Transitions in Adobe Premiere.

Unit-7

Key Frames and Effects: Key frames in Adobe Premiere, The Timeline, The

Effects Control Window, Adjusting Speed and Duration in Adobe Premiere, Slow Motion in Adobe Premiere, Fast-Motion Video in Adobe Premiere, Time Remapping in Adobe Premiere, Opacity in Adobe Premiere Pro, Adobe Premiere Effects, Adobe Premiere Trim Monitor.

Unit-8

Special Effect-Star Trek Transporter Effect: This unit shows you how to create the Star Trek Transporter Effect.

BMG 212: Advance Video Effects

Unit I

FCP Interface: Introduction, Saving a Project File, The Project Icon, Interface Windows, Importing Clips into Browser Window, Viewer Controls, The Timeline Window, The Canvas Window, Renaming a Sequence

Unit II

Organising Media: Introduction, Using Markers to Create Sub Clips, Labeling and Removing Markers, Changing Markers into Sub-clips, Creating Bins and Organising Clips, Column Headings

Unit III

Timeline: Introduction, Basic Navigation, Trace Labels, Thumbnail Displays in the Timeline, Storyboard Editing, Displaying Audio Waveforms, Timeline Editing Symbols, Timeline Navigation (Arrow Keys), Removing a Gap

Unit IV

Capturing Audio Video: Type of Input Supported, Storage Requirements for DV, Log and Capture Window, Capture Settings, Clip Settings Tab, Logging Tab, Specifying a Tape Reel, Clip Duration Box, Capture Buttons, Using Tunes to convert Audit samples Rates

THIRD YEAR

BMG 301: Animation Principles

Unit-1

What is an animator's job? (The passion and love of animation, your own studio, selling your talent, job of animator)

- small shop/midsize subcontractor/major studio, The workflow- pitching project/contracts/storyboard/objects/scene/ character/motions/testing/rendering/billing, issue of schooling, employability in animation)

Unit-2

The tasks of animation: (Conceptualization - storyboard/client presentation/timing the board/ breakdown the board/time allowance for rendering/rendering farm, Execution - dividing the work/script writing and approval/element breakdown/ milestones/design exterior scenes/design interior. Design characters/aquiring music sound effects voice talents/ choreography/building render farm/lip-sync/test pass rendering/ recording and mixing the track,/HD conformation to D.-5, recording the results/internet distribution)

Unit-3

What equipments will be necessary? (Equipment obsolence, Cost and ROI, burn rate, basic animation computer, choosing a computer, choosing hardware, audio creation, cabling, role of video in animation studio)

Unit-4

How do leading animation programs like Maya and 3ds Max work? (Common elements: views, navigation, layers and histories, timeline, 3ds max: description, program and view navigation/object manipulation/object creation and editing/ object editing/layers/trackbar, Maya: description, program and view navigation/object creation and editing/object editing/ layers/timeslider)

BMG 302: Introduction to Maya

1. **User interface:** (Title bar, menu bar, status line, the shelf, Toolbox, Workspace, Channel Box, Layer editor, time slider, range slider, command line, script editor button, Help line, Toolbox, Navigating a scene, setting up a project, Camera, Creating and placing a geometry, Focus and shade in view editor, transforming objects, Creating hierarchy, animating objects, shading an object, adding light, rendering animation).
2. **Polygonal Modeling:** (Polygon anatomy, selecting and editing polygon component, advantages in polygon modeling, Heads up display, custom polygon display, Tutorial for building a polygon model).
3. **Organic Modeling:** (Creating a custom shelf for polygon model, assigning hotkey, using polygonal marking menu, model structure, planning topology, Tutorial of modeling human head or equivalent structure, subdivision proxy, hierarchical subdivision surfaces, subdividing at render time, converting model to a subdivision proxy sculpt the geometry tool, finalize the geometry).
4. **Basic NURB Modeling:** (Components of NURB curves, component of NURB surface, surface or curve degree, curve direction, parameterization of curve and surface, surface direction, advantage and disadvantage of NURB modeling, Level of continuity, tools for achieving continuity, creating curves using curve tools, curves on surfaces, attaching and detaching curves, cutting and filleting curves, Tutorial for modeling with NURB, Revolving/extruding/lofting/birailing surfaces).
5. **Advanced NURB Modeling:** (Modeling with trimmed surface, Tutorial, modeling NURB patches, Tutorial).
6. **Preparing Models for Animation:** (Generating poly surfaces from NURB curves, Converting NURB surfaces to poly, hierarchical subdivision surfaces, Tutorial on modeling with subdivision surfaces).
7. **Deformers:** (Non linear deformers, applying and Using nonlinear deformers, Lattice deformers, cluster deformer, wire deformer, soft modification tool, blend shape deformer, wrap deformer).
8. **Joints and Skeletons:** (Creating skeletons, selecting and inserting joints, Joint tool options, orienting joints, world object and local transformation, Tutorial of creating biped skeleton).

BMG 303: Character Setup and Animation in Maya

Unit-1

Skinning and Advanced Deformers: (Rigid bind process, edit membership, flexors, smooth bind process, weight normalization, Tutorial on smooth skinning a character)

Unit-2

Connecting Attributes: (Direct connections, expressions, keyed relationships, types of constraints, using constraints)

Unit-3

Character Controls: (Forward kinematics, Inverse Kinematics, Tutorial on building a control rig)

Unit-4

Animation Basics: (Keyframe animation, in between and interpolation, setting keys, viewing and editing keyframes, playback controls, Tutorial on key frame animation, basic animation principles: squash and stretch, anticipation follow through, secondary action, case studies)

Unit-5

Character Animation: (Tutorial like walking and pushing a box)

Unit-6

Animation Tools: (File referencing; Creating references, managing references, Tutorial on creating non-linear animation, create character set, use trax editor, retargeting workflow, Tutorial on retargeting, object interaction, constraints, using parent constraints)

BMG 304: Advanced Maya

Unit 1

Texture Basics: (Hypershade selections, Working with hypershades, using attribute editors for editing materials, rendering nodes and their attributes, material nodes, texture nodes, placement nodes)

Unit 2

Texturing in practice: (Tutorial on building shading networks texture the stone wall material Create bronze material, create specular, diffuse and reflectivity maps, create a reflection map, use IPR to fine tune material attributes, tutorial on UV texture mapping, creating UVs in the UV texture editor)

Unit 3

Lights and camera: Light Nodes, types of lights, light attributes, spot light attributes, light Effects shadows, Camera nodes, Tutorial on indoor lighting, Tutorial on outdoor environment Lighting, setting scene, creating dome light)

Unit 4

Rendering: (Rendering preparation, render setting window, select a render engine, Anti-aliasing quality setting, anti-aliasing in material ray, How ray tracing works, tutorial using Ray tracing, tutorial on using masks, Motion blur, environment fog mental ray, tutorial on rendering With global illumination, tutorial on rendering caustics, tutorial on final gather, HDR image with final gather, rendering with displacement maps, displacement shading network, the approximation editor)

Unit 5

Particles and fields: (Creating particles, particle tool, emitter, particle attributes, lifespan, render Attributes, per particle attributes, Applying fields, types of fields, common field attributes, tutorial On particles and fields)

Unit 6

Maya Hair: (Using hair, Maya hair presets, Tutorial on creating hair from scratch)

Unit 7

Maya Cloth: (Loading Maya cloth, important concepts on cloth, tutorial on making a dress)

Unit 8

Rendering For Post Production: (Camera Mapping, Tutorial on camera mapping, creating a reflection map, environment ball, Tutorial on rendering, render layer, hard color pass,

ambient color pass ,soft reflection pass,soft reflection pass,hard specular pass,soft specular pass, case studies on each of these passes)

Unit 9

Compositing For Post Production:(setting up after effects, composition diffuse surface, compositing Refraction. Composition specular highlight, creat thrusters effects, masking the edge, case studies covering all of thise effects, make aninitial color contrast adjustment, add a shadow, create heat ripple, create pools of lights Feather the edge, color correction, case studies on each of these)

BMG305: Introduction to 3Ds Max

UNIT 1

INTRODUCTION: The views, The tools, Manipulating views, Tutorial: manipulating the views, The main toolbar, The command panel, Quad menus, Rollouts: inputs, spiners, and flyout menus, Summary

UNIT 2

THE 3DS MAX PRODUCTION PIPELINE: Project planning, Assessing the problem, Bidding and billing, Bidding fixed price, Time and materials, Determining the billing process, Signing copyright, Non-disclosure, and Non-compete agreements, Getting approvals, Creating storyboards, Model sheets, Creating mock-ups and animatics, Starting full-scale production, Delivering preliminary contents, Delivering final content, Billing the client, Ending the contract, Giving recognition, The production pipeline, Summary

UNIT 3

STARTING SIMPLE; CREATING SHAPES AND PRIMITIVES:

Creating shapes, Tutorial: creating basic shapes, Building a line, Tutorial: building a line, creating primitives, Tutorial: creating a sphere, Tutorial review, Tutorial: creating a box, Tutorial review: Building cylinders, cones and tubes, Tutorial: creating a cylinder, cone and tube, Segments and sides, Tutorial: editing the segments and size parameters, Editing primitives and shapes parameters, The modify panel, Summary

UNIT 4

MANAGING AND MANIPULATING 3D SPACE: Transform axis,

Transformation tools, The pivot point, Transform gizmos, Positional transforms, Tutorial: transforming with the select and move tool, Transform type-in dialog box, Tutorial: using the transform type-in dialog box, Using the quad menu, Tutorial: using the transform typein dialog box, Rotational transforms, Using the rotate transform gizmo, Scale transforms, Coordinate systems overview, Summary

UNIT 5

BUILDING WITH SUB-OBJECTS: Sub-objects, Tutorial: adding an editmesh modifier, Tutorial: transforming sub-objects, Building the mailbox body, Tutorial: building the mailbox body, Tutorial: creating the door using an editable poly object, Summary

UNIT 6

BUILDING THE WATER TOWER: Tutorial: building the tower cap, Tutorial: building the tower body, Tutorial: creating the cross beams, Tutorial: creating the vertical support beams, Tutorial: creating the tank floor, Building bottom cross beams, Accessories, Summary

UNIT 7

BUILDING THE ELASTIC-POWERED ATMOSPHERIC

TRANSPORTER: Overview, Tutorial: building the fuselage, Tutorial: building the wing, Tutorial: creating the stabilizer, Tutorial: creating the rudder, Tutorial: creating the propeller, Tutorial: the linkage and power band, Summary

UNIT 8

COMPLEX MODELING: CREATING A SKULL: Get to know

your subject, Where to start, Tutorial: the virtual studio, Applying a material, Tutorial: modeling within the virtual studio, Tutorial: refining the skull, Tutorial: refining the nasal cavity, Tutorial: creating more skull detail, Tutorial: creating an eye socket, Tutorial: adding the nasal bridge, Further refinement, Tutorial: refining the eye socket, Tutorial: building the horn, Tutorial: the final revision ...almost, Summary

Advanced 3D MAX-BMG 306

Unit-1

Building a Character: Building from a Box- Again, Tutorial: Creating the Side of the Fish, Tutorial: Building the Fish Head, Tutorial: Adding the Tail, Tutorial: Adding the Cheeks and Nose, Tutorial: Creating the Eye Socket, Tutorial: Adding Fins, Tutorial: Creating a Pectoral Fin, Tutorial: Building the Mouth

Unit-2

Basic Hierarchies and Parametric Animation: Basic Animation, Creating Key Frames, Auto Key versus Set Key Mode, Tutorial: Animating Parameters, Tutorial: Wiring Parameters Creating a Hierarchy, Tutorial: Using a Dummy Object .

Unit-3

Rigging and Animating: Setting up the Character for Animating, Tutorial: Creating the Eyes and Eyelids Creating the Eyelids, Tutorial: Finishing the Eyelids, Tutorial: Controlling the Eyes with Look At, Tutorial: Rigging the Body, Tutorial: Creating a Hierarchy, Tutorial: Creating a Working Tail Tutorial: Skinning a Fish Tutorial: Animating the Rig .

Unit-4

Material Basics: The Material Editor-the Key to Creation, Material Editor Overview, Tutorial: Selecting a Shader Specular Controls Maps Mapping, Mapping Problems and Solutions, Bump Maps and Other Material Attributes, General Map Options .

Unit-5

Materials Unwrapped: Tutorial: Creating and Applying the Materials for the Mailbox Tutorial: Mapping with unwrap UVW Tutorial: Aging the Mailbox Tutorial: Aging the Flag .

Unit-6

Lighting and Atmospheric: Before the Lighting Begins Interior Lighting (Inside the Puddle), Tutorial: Adding Lights to a Scene, Tutorial: Customized Lighting Projection Maps and Advanced Effects, Tutorial: Additional Light Sources, Tutorial: Adding Depth to Water, Tutorial: Creating Streaks of Light through the Water .Creating a Camera Tutorial: Rendering Output to Frames Tutorial: Setting Up a Render Farm, Tutorial: Using Network Rendering the Queue Monitor Editing Job Output Controlling Rendering Servers The Split Scanline Option .

Unit-8

Particle Flow for Modeling and Effects: What is Particle Flow? Tutorial: The PF Source, Tutorial:

Applying Materials to Particles, Tutorial: Events, Tests, and Branching .

BMG 307: Character Animation

Unit-1

Basics: (Workflow in 3d animation, principles of animation related to action/overall animation, human anatomy, 3ds max features including bones constraints, modifiers, expression controllers, maxscript, IK solver).

Unit-2

Character Modeling: (Modeling methods, Creating torso, arms, legs, neck, body, face).

Unit-3

Preparation for Modeling: (Creating skeleton with two/four legs, skinning a model, assigning weights to vertices, skinning two legged model).

Unit-4

Animation of Biped (Two-legs) Character: (Two leg walk, animating two leg walk-various poses/cycles).

Unit-5

Animation of Quadruped (Four-legged) Character: (Four leg walk, animation of walk-toot node/legs/spine/tail/ears, Complete walk cycle).

Unit-6

Animation of Expressions: (Body/face expressions, morphing face expressions, animating eyes, lip sync).

Unit-7

Preparing Biped with Character Studio: (Character Studio basics, creating biped, skinning - assigning Physique modifier/ editing envelop/creating bulges, applying tendons, using Physique flies).

Unit-8

Animating Using Character Studio: (Methods of animating a Biped, animating a Biped, libraries of biped animation).

BMG 308: CG Film-Making

Story Ideas: Two types of Story Concepts: Type

1: Your Stories/Type 2: Someone Else's Stories; Filtering: Is the Idea Ripe to Be Animated? Why Are You Making This Film? Avoiding Pitfalls and Perils: Cliches/Not Having a Story/Gratuitous Photo realism/Biting Off More Than You Can Chew, Feasibility: Your Experience Level/ Time Resources/Scope/Two Final Filters, The Example Film's Story.

Production: 3DS Max and the Animation Pipeline:

Wearing the Producer's Hat, Preparing to Prepare,

Scope of Work, R&D and Learning Feasibility Revisited, Planning, Defining the Max Animation Pipeline, Identifying granular Tasks, Organizational Methods, Scheduling: Putting a Gun to the Head of invention, Production Documents, Factors That Affect Scheduling, Planning the Example Film, Top-level Considerations, Scope of Work, Example Film's Toolset, Feasibility, What Got Cut, Key Methodology Decisions.

Scriptwriting: Story and Character through Dialogue: Studying a Little Eugene O'Neill, Preparation, Background Reference, Outlining the plot, Creating a Back Story, Knowing What Your Character Would Do, Sample biography, Scriptwriting: What Does a Given Phrase Make You Animate?, Character Acting Starts With the Script, Writing Dialogue, Internal Dialogue: Writing Action, Revisions, Writing the Example Film's Script, Fine-Tuning the Dialogue.

Art Direction: Designing the Animation: Art

Direction: Establishing and Aesthetic, Reference Creating Concept Art: Approach: Communicating an Idea.

Character Design. * Facial Design, Male Facial design Female Body/Costume Design, Male Body/Costume Design, Character's Design drawings, Set Design, Tying Your Aesthetic Elements Together, The Visual Identity. **Storyboarding: Cinematic Planning:** The Cinematographer's job Storyboarding: Blocking and Story Progression Character Choreography and Placement Action Dram and Expressions Camera composition and Camera Moves Animators Edit at the Beginning Storyboards Are the Ultimate Planning Tool Drawing beyond storyboards

Animatic Color Script Previsualization Animations Balancing Good planning Without Sacrificing Serendipity Example Storyboards.

Sound: Your Film's Sonic Identity: General Notes on Sound: Sound as a Storytelling Tool General Equipment and process Audio Advice From Industry Expert Alan Stuart Character Dialogue: Voice

Casting Directing a Dialogue-Recording Session Characters' Recording Session Alan Stuart on Dialogue Recording, Sound Effects: Basic Sound Effect Techniques Sound Effects for "The Game to Save the World" Music: Working with a Composer or Songwriter, Setting the Tone. Alan Stuart on Sound Effects: Using Existing Music Audio Workflow for Your Animation.

Layout: Preparing the Scene: (Back to the Producer's Job: Scene Breakdown and File Creation Organizing with selection Sets and Filters Blocking Movement Pre visualization Revisited.

Facial Animation: Keyframing Expressions: Rigging the Face with Morph Targets: Defining a Set of Morph Targets Modeling Setting Up the Morpher Modifier Facial Animation: Animating the Eyes Animating Facial Expressions Lip-synching Another Approach to Morphing: Muscles)

Bringing the Background to Life: Secondary animation: 3-D Effects Animation Scatter Compound Objects, Orbiting particle Systems Secondary Animation with the Flex Modifier Final Linking, aming, and Merging Effect: Orbiting Light Trails: Creating Random Oscillations The Appearance of Light Effect: A Flame Made of Bubbling Glass.

Lighting and Rendering: Crafting an Atmosphere: Choosing a Renderer. The Importance of Lighting in CG: Character Lighting: Three-Point Setup. Character Lighting Within a Scene: Integrating Character and environmental Lighting. Adding Global Illumination and High Dynamic Range Images. How the HDRI Image for Cloud 10 Was Created, Rendering: Environment and Video effects. Effects in the Example Film. Final Rendering Letting Your Computer Work for You.

Compositing and Video Editing: Finishing Touches: Compositing with Combustion 3: Creating a Videogame Interface Video Editing: simple Editing with Adobe Premiere Video Compression Codecs Getting Your Films Out to the World.