UNIVERSITY OF PUNE

B. Sc. (Animation)

Preamble :-

The relevance of any degree rests on its potential to serve the needs of the day. Considering the latest job scenarios, the **Faculty of Science** finds it necessary to institute an independent **B.Sc. Degree in Animation**. **The Bachelor of Science in Animation** will provide a strong foundation in the fundamentals of Artistic Design, Story Development, Project Management, Digital Content Creation and Portfolio Development. This course will help to gain skills in Computer Animation viz. 3-D Modeling, Character Design, Animation and Game Content Development. This will also help to learn how to complete a strong Portfolio of students work which will help them to sell their skills to employers in the fast paced industry. The contents of the course are dynamic and are based upon the industry trends.

The consumer demand of high quality animation and visuals has fueled the growth of the animation industry in this decade. The visual artist with excellent design and computer animation skills and a firm understanding of animation technology. They are producing stunning visuals for games, multimedia, web, television and documentaries. This proposed degree program is focus on developing students creativity and the skills in the areas of design, computer animation, simulation, advertisement etc. using cutting edge software. Successful graduates will complete a professional quality demo and able to prove animation abilities.

Due to its wide use in all walks of life including industry and business, animation has become synonymous with success and power. The college students, therefore, need to be given the basic theoretical knowledge, required skills and an adequate training in those skills related to animation technology so that they gradually get empowered and enter into the mainstream of the society as confident citizens. Considering these factors, the Faculty of Science proposes starting of a course entitled **Bachelor of Science (Animation) [B. Sc. (Animation)]** from the academic year 2010-11. This course may be taught in any existing Colleges. Any college desiring to start the course will have to follow the rules and procedure laid down by the university.

Objectives of the Course :-

The objectives of the B.Sc.(Animation) Course shall be as follows :-

1. To familiarize the students with various approaches, methods and techniques of Animation Technology.
2. To develop competencies and skills needed for becoming an effective Animator.
3. Mastering traditional & digital tools to produce stills and moving images.
4. Exploring different approaches in computer animation.
5. To enable students to manage Animation Projects from its Conceptual Stage to the final product creation.
6. To train students in applying laws of human motion and psychology in 2-D or 3-D characters.
7. To develop expertise in life-drawing and related techniques.
8. To apply Audio and Video Production Techniques to an Animation Project.

Eligibility :-

a) Higher Secondary School Certificate (10+2) or its equivalent Examination with English with any three science subjects such as Physics, Chemistry, Biology, Mathematics, Geography, biology, etc. or

b) Three Years Diploma Course of Board of Technical Education conducted by Government of Maharashtra or its equivalent. or

c) Higher Secondary School Certificate (10+2) Examination with English and any of the following vocational subjects in technical group of + 2 level (MCVC). e.g.
Subjects are.
Electrical Maintenance
Mechanical Maintenance
General Civil Engineering .
Electronics
Computer Science
Information Technology
Electronics Technology (J1/J2/J3)

d) Qualifying Elementary / Intermediate School level drawing examination is desirable.

Admission Process : Admission is based on the basis of Entrance Examination conducted at College level. Respective college will announce the Entrance Examination. There will be a paper of 100 (Hundred) Marks containing 50 questions (Two Marks for each Question).

Entrance test is based on the topics related with awareness of information technology, skill of visualization, lateral / create thinking, , English, non verbal reasoning & verbal reasoning.

Merit list for admission is prepared by considering 50 % of total Marks obtained in Entrance Examination and 50 % of total Marks obtained in 12^{th} or equivalent Examination (Mentioned in eligibility criteria).

Reservation and relaxation will be as per the rules of University of Pune and Government of Maharashtra.

Medium of Instruction :-

The medium of instruction for the course shall be English.

Duration :-

The duration of B.Sc.(Animation) Degree Program shall be three years.

Standard of Passing :-

i) In order to pass in the first year theory examination, the candidate has to obtain 40 marks out of 100 in each subject. (Minimum 32 marks out of 80 marks must be obtained in the University Examination.). There shall be continuous internal assessment of 20 Marks for each subject.

ii) In order to pass in the second year and third year theory examination, the candidate has to obtain 20 marks out of 50 in each subject. (Minimum 16 marks out of 40 marks must be obtained in the University Theory Examination.) There shall be continuous internal assessment of 10 Marks for each subject.

iii) In order to pass in practical examination, the candidate has to obtain 40 marks out of 100 in each subject. (Minimum 32 marks out of 80 marks must be obtained in the University Examination.) There shall be continuous internal assessment of 20 Marks for each subject.

Rules of A.T.K.T. :-

Rules of A.T.K.T. of B.Sc. Degree will be applicable to this Degree Course Also.

Fees :- Fees of the course will be decided by competent authority of university.

Examination Pattern :-

1) First Year :- Total 1200 Marks. (Annual Pattern)

800 Marks for 8 Theory Papers and

400 Marks for 4 Practical Courses.

Examinations will be conducted as per the University Guidelines.

2) Second and Third Year of B.Sc.(Animation):- (Semester Pattern)

The Semester Pattern followed for B.Sc. Degree will be applicable.

The distribution of papers and marks shall be as follows:-

300 Marks (50 marks for each paper) for 6 Theory Papers per semester.

300 Marks for 3 Practical Courses per year.

***Note :-Second & Third Year Practical Examination for all the Six Practical Courses will be conducted at the end of the respective Academic Year. Each Practical Course will be evaluated for 50 marks. Total Marks for Practical examination is 300. i.e.**

SECOND YEAR PRACTICAL EXAMINATION (Each Practical for 100 Marks)

1) Practical Paper I - Practical Course Paper-I (Sem. I) + Practical Course Paper-I (Sem. II)

2) Practical Paper II - Practical Course Paper-II (Sem. I) + Practical Course Paper-II (Sem. II)

3) Practical Paper III -Practical Course Paper-III (Sem. I) + Practical Course Paper-III (Sem. II)

THIRD YEAR PRACTICAL EXAMINATION (Each Practical for 100 Marks)

1) Practical Paper I - Practical Course Paper-I (Sem.III) + Practical Course Paper-I (Sem. IV)

2) Practical Paper II - Practical Course Paper-II (Sem. III) + Practical Course Paper-II (Sem.IV)

3) Practical Paper III -Practical Course Paper-III (Sem.III) + Practical Course Paper-III(Sem. IV)

Examinations will be conducted as per the University Guidelines.

Qualifications of Teachers : Teachers to be appointed for B.Sc. (Animation **)** Course should have following Educational qualifications.

1) M.Sc. (Computer/electronics/Mathematics/Statistics /Physics) along with Minimum 2 years diploma in Animation or any equivalent degree in Animation.

2) M.C.A.. (Science/Engineering) along with Minimum 2 years diploma in Animation or any equivalent degree in Animation.

Along with above mentioned qualifications , Qualifying in NET /SET examination is essential as per UGC & university rule.

Syllabus Framework :-(Structure)

1) First Year B.Sc.(Animation) :-

Theory Courses:-

1. Elements of Information Technology.
2. Introduction to Programming Languages.
3. Basics of Animation.
4. Foundation Art.
5. Computer Based 2D Animation.
6. Multimedia & Computer Graphics.
7. Introduction to 3D Animation & Modeling- I
8. Introduction to Mass Communication & Media Literacy.

Practical Courses:-

9. Practical Course Paper-I based on Theory Paper-I & II.
10. Practical Course Paper-II based on Theory Paper-III & IV.
11. Practical Course Paper-III based o Theory Paper-V .
12. Practical Course Paper-IV based on Theory Paper VI &VII.

*** Theory & Practical Course Examination shall be conducted at the end of the Year**

(Annual Pattern). Rules for paper setting & assessment are according to B.Sc. examinations.

2) Second Year B.Sc.(Animation) :-

Semester-I

Theory Courses:-

AN-2101	Technical English-I.
AN-2102	3-D Animation-I.
AN-2103	Digital Art -I.
AN-2104	Multimedia Systems.
AN-2105	Animation Techniques-I
AN-2106	Production Process -I.

Practical Courses:-

1. Practical Course Paper-I based on Theory Paper- AN-2102.
2. Practical Course Paper-II based on Theory Paper- AN-2103
3. Practical Course Paper-III based o Theory Paper- AN-2105 & AN-2106

Semester-II

Theory Courses:-

AN-2201	Technical English-II.
AN-2202	3-D Animation-II.
AN-2203	Digital Art - II.
AN-2204	Multimedia-Communication .
AN-2205	Animation Techniques -II
AN-2206	Production Process -II

Practical Courses:-

1. Practical Course Paper-I based on Theory Paper- AN-2202.
2. Practical Course Paper-II based on Theory Paper- AN-2203
3. Practical Course Paper-III based o Theory Paper- AN-2205 & AN-2206.

Note: - Examination for all the Six Practical Courses will be conducted at the end of Academic Year.

3) Third Year B.Sc.(Animation) :-

Semester-III

Theory Courses:-

1. Script Writing-I.
2. Content Development Direction-I.
3. Gaming Technology
4. Digital Editing and Motion Graphics-I.
5. Visual Effects-I.
6. V.F.X.-I.

Practical Courses:-

7. Practical Course Paper-I based on Theory Paper-II.
8. Practical Course Paper-II based on Theory Paper-III & IV.
9. Practical Course Paper-III based o Theory Paper-V & VI.

Semester-IV

Theory Courses:-

1. Script Writing-II.
2. Content Development Direction-II.
3. Gaming Production
4. Digital Editing and Motion Graphics-II.
5. Visual Effects-II.
6. V.F.X.-II.

Practical Courses:-

7. Practical Course Paper-I based on Theory Paper-II.
8. Practical Course Paper-II based on Theory Paper-III & IV.
9. Practical Course Paper-III based o Theory Paper-V & VI.

Syllabus details of the Second Year B.Sc.(Animation):

(Effective from A.Y. 2013-2014)

Semester I

AN2101 : Technical English -I

Ch 1: Introduction to Technical Writing **(12)**

1.1 Writing at Work, Technical writing definition
1.2 Importance of Technical writing
1.3 conflict resolution in Team Meeting
1.4 Team work, strategies for Team collaboration

Ch 2: Producing the Product **(8)**

2.1 Process overview
2.1.1 Prewriting
2.1.2 Writing
2.1.4 Rewriting

Ch 3: Objectives in the Technical writing **(6)**

3.1-Writing clarity
3.2 Conciseness
3.3 Accuracy
3.4 Organisation
3.5Ethics

Ch-4: Audience Recognition & Involvement **(8)**

4.1 Audience Recognition
4.2 Defining terms of difference audience levels
4.3 Multiculturalism
4.4 Audience involvement.

Ch 5: Memos & e-Mails **(8)**

5.1 Difference between memos &e-Mails
5.2Messages
5.3 Memos
5.4 Sample Methods
5.5 e-Mail

5.6 Techniques for writing effective e-Mail
5.7Precess & Process log

Ch-6: Letters **(8)**

6.1 Letter Components
6.2 Letter formats
6.3 Criteria for different types of Letters.
6.4 Process & Process Logs.

Reference Books :

1. Technical Writing – By Sharon J. Gerson & Steven M. Gerson PEARSON Publications

AN 2102 3D Animation – I

Chapter: 1 Exploring the 3ds Max Interface **[8]**

1.1 Basic 3ds Max Terms and Concept
- 1.1.1 What is CGI
- 1.1.2 Production Workflow
- 1.1.3 CGI Workflow
- 1.1.4 Max Terms and Concept

1.2 Controlling the Max Interface
- 1.2.1 Zooming a View
- 1.2.2 Panning a View
- 1.2.3 Walking through a view
- 1.2.4 Rotating a View
- 1.2.5 Maximizing the active viewport

1.3 Working with Files, Importing and Exporting
- 1.3.1 Project and File Management Workflow
- 1.3.2 Importing supported formats
- 1.3.3 Importing preference
- 1.3.4 Exporting supported formats
- 1.3.5 Using the OBJ format
- 1.3.6 Using the Layers

1.4 Transforming Objects, Pivoting, Aligning and Snapping
- 1.4.1 Translating, Rotating and Scaling Objects
- 1.4.2 Using Pivot Points
- 1.4.3 Using the Align Commands
- 1.4.4 Using Snap Options

1.5 Grouping, Linking and Parenting Objects
- 1.5.1 Creating groups
- 1.5.2 Ungrouping objects
- 1.5.3 Linking objects
- 1.5.4 Unlinking objects
- 1.5.5 Understanding Parents, Child and Root Relationship

Chapter: 2 Modeling in 3ds Max **[12]**

2.1 Exploring the Model Types and Modeling Concept
- 2.1.1 Parametric Objects Versus editable Objects
- 2.1.2 Converting to editable Objects
- 2.1.3 Understanding Normals
- 2.1.4 Working with Sub Objects
- 2.1.5 Using Soft Selections

2.2 Modifiers and Modifier Stack

- 2.2.1 Applying Modifiers
- 2.2.2 Using Modifier Stack
- 2.2.3 Collapsing the Stack
- 2.2.4 Using Collapse Utility
- 2.2.5 Exploring Modifier Types

2.3 Splines and Shapes

- 2.3.1 Working with shape primitives
- 2.3.2 Editable Splines versus the Edit Spline modifier
- 2.3.3 Controlling Spline geometry
- 2.3.4 Editing Spline sub-objects
- 2.3.5 Spline – specific modifiers

2.4 Modelling with Polygons and Patches

- 2.4.1 Creating Editable Poly Objects
- 2.4.2 Editing Poly Objects
- 2.4.3 Introduction Patch Grids
- 2.4.4 Editing Patches
- 2.4.5 Using Modifiers on Patch Objects

Chapter: 3 Materials and Shading **[8]**

3.1 Using the Material Editor

- 3.1.1 Understanding Material Properties
- 3.1.2 Using the Slate Material Editor controls
- 3.1.3 Selecting and applying materials
- 3.1.4 Removing materials and maps
- 3.1.5 Working with libraries

3.2 Using Shading Types

- 3.2.1 Understanding the standard Shading Types
- 3.2.2 Extended Parameters rollout
- 3.2.3 Super Sampling rollout
- 3.2.4 Dynamic Properties rollout
- 3.2.5 Mental ray connection rollout

3.3 Material Details with Maps

- 3.3.1 Understanding the different map types
- 3.3.2 Connecting maps to materials
- 3.3.3 Using maps Rollout
- 3.3.4 Creating Texture with External Tools using Photoshop
- 3.3.5 Capturing digital images

3.4 Compound Materials

- 3.4.1 Blend Material

3.4.2 Composite Material
3.4.3 Multi/Sub – Object
3.4.4 Morpher
3.4.5 Shell and Shellac

3.5 Material Modifiers

3.5.1 Applying Multiple Material
3.5.2 Material By Element modifier
3.5.3 Lights with Material by Element modifier
3.5.4 Approx and Displace Mesh modifiers
3.5.5 Displacing geometry with bitmap

Chapter: 4 Introduction to Animation [13]

4.1 Using the Time Controls
4.1.1 Setting frame rate
4.1.2 Setting speed and direction
4.1.3 Using Time Tags

4.2 Working with Key
4.2.1 Auto Key mode
4.2.2 Set Key mode
4.2.3 Coping and Deleting animation keys
4.2.4 Using Track Bar
4.2.5 Viewing and Editing Key Values

4.3 Understanding Controllers Types

4.3.1 Automatically assigned controllers
4.3.2 Assigning controllers with the Animation menu
4.3.3 Assigning controllers in the Motion Panel
4.3.4 Assigning controllers in the Track View
4.3.5 Setting default controllers
4.3.6 Noise and Spring controller

4.4 Using Constraints

4.4.1 Restricting Movement with controllers
4.4.2 Using Constraints

4.5 Animating Objects

4.5.1 Animating Cameras

4.5.2 Animating Lights
4.5.3 Animating materials
4.5.4 Creating Image File Lists

Chapter: 5 Cameras, Lighting & Rendering [11]

5.1 Configuring and Aiming Cameras

5.1.1 Creating a Camera object
5.1.2 Controlling a Camera
5.1.3 Camera type and display options
5.1.4 Creating multi-pass camera effects
5.1.5 Using Depth of Field effect

5.2 Basic Lighting Techniques

5.2.1 To know the Light Types
5.2.2 Creating & Positioning Light Objects
5.2.3 Altering Light Parameters
5.2.4 Using the Sunlight and Daylight systems
5.2.5 Using Volume Lights

5.3 Rendering a Scene and Enabling Quicksilver

5.3.1 Render Parameters
5.3.2 Render Types
5.3.3 Using Command-Line Rendering
5.3.4 Creating Panoramic Images
5.3.5 Creating an Environment and rendered the environment

Reference Book:

1. 3Ds Max –Bible 2011 By Kelly L. Murdock - Wiley Publications
2. 3ds Max 2008 by Sham Tickoo **(Pearson Pu*blications)***

AN2103 Digital Art I

Chapter: 1 Introduction to Photoshop as Digital tool **(4)**

1.1 Workspace

1.1.1 Workspace basic
1.1.2 Palettes and Menus
1.1.3 Tools
1.1.4 Viewing images
1.1.5 Ruler, Guide and Grids
1.1.6 Preferences
1.1.7 Recovery and undo
1.1.8 Memory and Performance

1.2 **Opening and Importing Images** **(4)**

1.2.1 Photoshop Images
1.2.2 Image size and Resolution
1.2.3 Acquiring images from cameras and scanners
1.2.4 Creating, opening, and importing images
1.2.5 Placing files
1.2.6 High dynamic range images

Chapter 2: Colours **(4)**

2.1 Introduction to Colours

2.1.1 About color
2.1.2 Color modes
2.1.3 Converting between color modes
2.1.4 Choosing colors

2.2 Making color and tonal adjustments **(4)**

2.2.1 Viewing histograms and pixel values
2.2.2 Understanding color adjustments
2.2.3 Adjusting image color and tone
2.2.4 Targeting images for press.
2.2.5 Matching, replacing, and mixing colors
2.2.6 Making quick image adjustments
2.2.7 Applying special color effects to images

Chapter 3: Retouching and transforming **(4)**

3.1 Adjusting crop, rotation, and canvas
3.2 Retouching and repairing images
3.3 Correcting image distortion and noise
3.4 Adjusting image sharpness and blur
3.5 Transforming objects
3.6 Liquify filter
3.7 Vanishing Point
3.8 Create panoramic images

Chapter 9: Type **(4)**

9.1 Creating type
9.2 Editing text
9.3 Formatting characters
9.4 Fonts
9.5 Line and character spacing
9.6 Scaling and rotating type
9.7 Formatting paragraphs
9.8 Creating type effects

Reference books:

1. Adobe Photoshop Bible cs5 by Lisa Danae Dayley,brad dayley --- Wiley india

   ISBN 13-9788126527199

2. Adobe Photoshop CS6 (Classroom in a Book) ISBN – 978-81-317-9164-6
   By PEARSON Publications

AN 2104 MULTIMEDIA SYSTEMS

1.Introducing Multimedia & Multimedia information (6)

1.1-Introduction
1.2 Multimedia Today
1.3 Future of Multimedia
1.4 Elements of Multimedia
1.5-What is multimedia?
1.6-Early Hypertext and Collaborative Research
1.7-Multimedia and Personalized computing
1.8-Multimedia on the Map
1.9-Multimedia System: The challenges

2.The convergence of Computers, communication and entertainment Products. (8) 2.1 Technology Trends
2.2Multimedia Appliances : Hybrid Devices
2.3 A designers view of Multimedia Appliances
2.4 Industry Perspectives for the next decade

3.Digital Audio Representation and Processing (6)

3.1 Uses of Audio in computer applications
3.2 Psychoacoustics
3.3Digital Representations of sound
3.4Transmission of digital sound
3.5Digital Audio signal Processing
3.6Digital music making

4.Video Technology (6)

4.1 Sensors for TV Cameras
4.2Color Fundamentals
4.3Color Video
4.4Video Performance Measurements
4.5Video Equipment

5.Digital Video and Image Compression (10)

5.1-Evaluating a compression System
5.2-Redundancy and Visibility
5.3-Video compression techniques
5.4-Standardization of algorithms
5.5-The JPEG Image compression standards
5.6-The MPEG Motion Video Compression Standards
5.7 -DVI Technology

6.Multimedia Devices Presentation Services and User Interface (8)

6.1-Multimedia services and the Window system
6.2-Client control of continuous media

6.3-Device control
6.4-Temporal Coordination and Composition
6.5-Toolkits
6.6-Hyper application

7.Multimedia Interchange (6)
7.1-QuickTime Movie File (QMF) format
7.2-OMFI
7.3-MHEG(Multimedia and Hypermedia Information Encoding Expert Group)
7.4-Format Function and Representation Summery
7.5-Track model and object model
7.6-Real-Times Interchange
7.7-Towards a Performance Model

Reference Books

1. Multimedia in Practice (PEARSON) –Jeffcoate.

2. Multimedia Systems (PEARSON) –John F.Koege Buford

3. Multimedia Computing Communication and Application -Steinmetz

AN2105 Animation Techniques –I

Unit: 1 Appeal and History of Stop Motion **(9)**

1.1Appeal & History of Stop Motion

1.1.1 Appeal of Medium
1.1.2. The Beginning of stop motion animation
1.1.2 Cut – out animation & Clay-mation

1.2 **Stop Motion Industry**

1.2.1 The Production Pipeline
1.2.2 Concept art and design
1.2.3 Storyboarding
1.2.4 Sound recording and exposure sheet
1.2.5 Designing and Building Puppets and Sets
1.2.6 Animation
1.2.7 Post-Production

Unit : 2 Introduction to Claymation

2.1 Introduction to Claymation Technique 5
2.1.1 Claymation Industry
2.1.2 Creating Clay model
2.1.3 Wire Armatures
2.1.4 Building Simple wire Armatures
2.1.5 Latex build-ups Puppets
2.1.6 Clay Puppets
2.1.7 Creating multi models for animation

2.2 Set and Props 4

2.2.1 Interior
2.2.2 Exterior
2.2.3 Props

2.3 Puppet Animation 5

2.3.1 Basic Animation
2.3.2 Morphing
2.3.3 Movements
2.3.4 Walk
2.3.5 Blinks
2.3.6 Dialogue

2.4 Capturing Movement 2

2.4.1 What you need
2.4.2 Digital SLR Cameras/webcams
2.4.3 Tripod
2.4.4 Software

2.5 Composting and Exporting movie 4

2.5.1 Rotoscoping
2.5.2 Composting BG
2.5.3 Exporting movie

Unit : 3 Introduction to Cut-Out Animation

3.1 Introduction to Cut-Out Animation Technique 4

3.1.1 History of Cut out Animation
3.1.2 Traditional Cut out Technique
3.1.3 Digital Cut out Technique

3.2 Character Design for Cut – out Technique 5

3.2.1 Design character for cut out technique
3.2.2 Creating hand gestures
3.2.3 Facial expressions
3.2.4 Blink

3.3 Set and Props 4

3.3.1 Interior
3.3.2 Exterior
3.3.3 Props

3.4 Animation using Digital Software (flash) 4

3.4.1 Creating animation using software
3.4.2 Importing character
3.4.3 Disturbing different body part in to layers
3.4.4 Basic Animation
3.4.5 Character animation

3.5 Composting and Exporting movie 4

3.5.1 Composting BG
3.5.2 Exporting movie

Reference Book:

The Art of Stop Motion Animation - by Ken Priebe -- Course technology.

AN 2106 Production Process I

Chapter 1: Pre-Production **(10)**

1.1 Concept And Story
1.2 Concept Design
1.3 Difference between concept & Story
1.4 Building one from the other
1.5 Storytelling
1.6 Introduction to Story Writing
1.7 How to write story

Chapter 2: Research **(8)**

2.1 Period/Location
2.2 Historic / Scientific facts
2.3 Society
2.4 Costumes
2.5 Props

Chapter 3: Character Design **(12)**

3.1 Anthropomorphism
3.2 Personality
3.3 Appeal
3.4 Character Bible and Design
3.5 Different types of Character
3.6 Male female children
3.7 Character Biography
3.8 Character Construction
3.9 Character Proportion
3.10 Costume

Chapter 4: Character Model Sheets **(8)**

4.1 Turn- around
4.2 Expression Chart
4.3 Extreme poses
4.4 Proportion Chart

Chapter 5: BG Design **(10)**

5.1 Color Keys
5.2 Color moods
5.3 Location, Plan,
5.4 Establishing BG,
5.5 Key Location
5.6 Props Design

Reference Books:

Storyboard Design Course by Giuseppe Cristiano ---- Barron's

How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New york

Syllabus details of the Second Year B.Sc.(Animation):

Semerster II

AN 2201 : Technical English -II

1 Ch 1: Job Searching **(12)**

1.1 How to find the job openings
1.2 Criteria for effective resumes
1.3 Methods of delivery
1.4 Sample resumes
1.5 Criteria for effective letters of applications
1.6 e-Mail Cover messages & sample applications
1.7Techniques for interview effectively.
1.8 Follow up letters

Ch 2: Visual Appeal : Document Design **(8)**

2.1 Importance of Document Design
2.1.1 Organisation
2.1.2 Access
2.1.4 Variety

Ch 3: Visual Appeal : Graphics **(8)**

3.1-Benefits of visual aids
3.2 Colour
3.3 Three Dimensional Graphics
3.4 Criteria for effective Graphics
3.5 Types of Graphics

Ch-4: Technical Applications : brochures & Newsletters **(8)**

4.1 Objectives
4.2 Why write brochures
4.3 Criteria for writing brochures
4.4 Process
4.5 Why write Newsletters
4.6 Criteria for writing Newsletters
4.7 Process

Ch 5: Technical Description **(8)**

5.1 Types of technical description
5.2 Criteria for writing technical description
5.3 Process
5.4Process Log
5.5.Sample technical descriptions

Ch-6: Preparing Instructions & User Manual **(8)**

6.1 criteria for writing short instructions
6.2 Process
6.3 Process Log
6.4 Sample short instructions.
6.5 criteria for writing a User Manual
6.6 Process
6.7 Process Log
6.8 Sample User Manuals.

Reference Books :

1. Technical Writing – By Sharon J. Gerson & Steven M. Gerson PEARSON Publications

AN 2202 3D Animation – II

Chapter: 1 Advance Modeling [13]

1.1 Building Complex Scenes and working with the Schematic View

1.1.1 Working with Containers
1.1.2 Referencing External Objects
1.1.3 Setting Up Asset Tracking
1.1.4 Using the Schematic View Window
1.1.5 Working with Hierarchies

1.2 Deforming Surface and Using the Mesh Modifiers

1.2.1 Using the Deformation Brushes
1.2.2 Primitive Maintenance Modifiers
1.2.3 Edit Geometry Modifiers
1.2.4 Miscellaneous Modifiers
1.2.5 Subdivision Surface Modifiers

1.3 Working with Compound Objects

1.3.1 Morphing Objects
1.3.2 Creating Conform, Shape Merge & Terrain Objects
1.3.3 Creating a Scatter Object
1.3.4 Creating a Loft Object
1.3.5 Working with Pro Boolean and Pro Cutter Objects

1.4 Working with Solids and Body Objects

1.4.1 Importing CAD Objects
1.4.2 Converting Max Objects to Body Objects
1.4.3 Working with Body Objects

1.5 Adding and Styling Hair and Fur Using Cloth

1.5.1 Working with Hair
1.5.2 Styling Hair
1.5.3 Rendering Hair
1.5.4 Creating Cloth

Chapter: 2 Unrapping UVs and Mapping Textures [6]

2.1 Mapping Modifiers

2.1.1 UVW Map Modifier
2.1.2 UVM Mapping Add and Clear modifiers
2.1.3 UVW XForm modifiers
2.1.4 Map scaler modifier
2.1.5 Camera Map modifiers

2.2 Using the Unwrap UVW Modifier

2.2.1 The Edit UVWs interface
2.2.2 Rendering UV templates
2.2.3 Relaxing vertices
2.2.4 Mapping multiple objects
2.2.5 Using the Spline mapping

2.3 Using Pelt Mapping

2.3.1 Selecting Seams
2.3.2 Positioning the projection gizmo
2.3.3 Stretching the pelt mapping

2.4 Creating Baked Textures and Normal Maps

2.4.1 Using Channels
2.4.2 Rendering to a Texture
2.4.3 Creating Normal Maps

Chapter: 3 Advance Animation Techniques [17]

3.1 Animation Layers, Modifiers and Complex Controllers

3.1.1 Working with Animation Layers
3.1.2 Baking Animation Keys with the Point Cache Modifier
3.1.3 Using the Animation Modifier
3.1.4 Examining Complex Controllers

3.2 Animating with the Expression Controller & Wiring Parameters

3.2.1 Working with Expressions in Spinners
3.2.2 Understanding the Expression Controller Interface
3.2.3 Animating transforms with the Expression & Float Expression controller
3.2.4 Wiring Parameters

3.3 Working with Functions Curves in the Track View

3.3.1 The Track View layouts & Interface
3.3.2 Working with Keys
3.3.3 Editing Time
3.3.4 Editing Curve
3.3.5 Working with Controllers

3.4 Understanding Rigging and Working with Bones

3.4.1 Assigning an IK Solver
3.4.2 Setting bone parameters
3.4.3 Recording bones
3.4.4 Refining and mirroring bones
3.4.5 Making Objects into bones

3.5 Working with Inverse Kinematics

3.5.1 Forward Kinematics versus Inverse Kinematics
3.5.2 Creating an Inverse Kinematics System
3.5.3 Using the Various Inverse Kinematics Methods

Chapter: 4 Advance Lighting & Rendering [10]

4.1 Lighting, Light tracing and Radiosity

4.1.1 Local Advance Lighting Setting
4.1.2 Enabling Light tracing
4.1.3 Light tracing works
4.1.4 Lighting for radiosity
4.1.5 Local & Global Advanced Lighting Setting

4.2 Using Atmospheric and Render Effects

4.2.1 Using Exposure Controls
4.2.2 Creating Atmospheric Effects
4.2.3 Using Fire & Fog Effects
4.2.4 Creating Lens Effects
4.2.5 Using Other Render Effects

4.3 Rendering with Mental Ray

4.3.1 Enabling mental ray
4.3.2 Mental ray Lights and Shadows

4.4 Batch and Network Rendering

4.4.1 Understanding and Setting up Batch Rendering System

4.4.2 Understanding and Setting up Network Rendering System
4.4.3 Configuring the Network Manager and Servers

Chapter: 5 Dynamic Animation [6]

5.1 Creating Particles

5.1.1 Understanding the Particle System
5.1.2 Using the Spray & Snow Particle Systems
5.1.3 Using the Blizzard Particle System
5.1.4 Using the PArray Particle System
5.1.5 Using PCloud Particle System

5.2 Particle Flow

5.2.1 The Particle Age map
5.2.2 The Particle MBlur map
5.2.3 The Standard Flow
5.2.4 Working with actions

5.3 Simulation Cloth Dynamics

5.3.1 Defining cloth properties and force
5.3.2 Creating a cloth simulation
5.3.3 Viewing cloth tension

5.4 Simulation Hair Dynamics

5.4.1 Making hair live
5.4.2 Enabling collisions
5.4.3 Enabling forces
5.4.4 Running a simulation
5.4.5 Setting the properties

Reference Book:

1. 3Ds Max –Bible 2011 By Kelly L. Murdock - Wiley Publications
2. 3ds Max 2008 by Sham Tickoo (Pearson Publications)

AN 2203 Digital Art II

Chapter 1: Printing **(8)**

1.1 Printing from Photoshop
1.2 Printing with color management
1.3 Printing images to a commercial printing press
1.4 Printing duotones
1.5 Printing spot colors

Chapter 2: Web graphics **(8)**

2.1 Working with web graphics
2.2 Slicing web pages
2.3 Modifying slices
2.4 Slice output options
2.5 Creating web photo galleries
2.6 Optimizing images
2.7 Web graphics optimization options
2.8 Output settings for web graphics

Chapter 3: Filters **(10)**

3.1 Filter basics
3.2 Filter effects reference
3.3 Applying specific filters
3.4 Add Lighting Effects

Chapter 4: Video and animation **(10)**

4.1 Video and animation in Photoshop
4.2 Creating images for video
4.3 Import video files and image sequences
4.4 Interpreting video footage
4.5 Painting frames in video layers
4.6 Editing video and animation layers
4.7 Creating frame animations
4.8 Creating timeline animations
4.9 Preview video and animations
4.10 Save and export video and animations

Chapter 5: Automating tasks **(5)**

5.1 Automating with actions
5.2 Creating actions
5.3 Processing a batch of files
5.4 Scripting

Chapter 6: Keyboard shortcuts **(7)**

6.1 Customizing keyboard shortcuts
6.2 Default keyboard shortcuts

Reference books:

1.**Adobe Photoshop Bible cs5** by Lisa Danae Dayley,brad dayley --- Wiley india ISBN 13 - 9788126527199

2.**Adobe Photoshop CS6** (Clasroom in a Book) ISBN – 978-81-317-9164-6
By PEARSON Publications

AN 2204 Multimedia Communications

1. Multimedia Communications (6)

1.1-Introduction.
1.2- Multimedia communications Model.
1.3-Elements of multimedia Systems.
1.4-User requirements.
1.5-Network requirements.

2. Overview of multimedia Software tools. (6)

2.1-Music sequencing Notation.
2.2-Digital Audio.
2.3-Graphics & Image editing.
2.4-Video editing.
2.5-Animation.

3.Graphics&Image data representation. (6)

3.1- Graphics Image data types.
3.2-Fil Formats.

4.Audio Visual Integration. (8)

4.1-Introdution.
4.2-Media Interaction
4.3-Bimodality of Human Speech.
4.4-Lip reading.
4.5-Lip Synchronization.
4.6-Lip tracing.

5. Standards for multimedia Communication. (10)

5.1-Introdution.
5.2-Reference Model.
5.3-Standards relating to interpersonal communications.
5.4- Standards relating to interactive applications over the Internet.
5.5-Standarads for entertainment applicants.

6.Digital Communication Basics. (12)

6.1-Introduction.
6.2-Transmission media.
6.3-Sources of signal impairment.
6.4-Asunohronus transmission.
6.5-Synchronous transmission.
6.6-Error detection methods.
6.7-Protocol Basics.
6.8-HDLC Protocol.

Reference Books

1. Fundamental of multimedia by- Ze-Mian Li & Mark Drew (PHI Publications)

2. Multimedia Communications System By K R Rao , Z S Bojkovic & (PHI Publication)

3. Multimedia Communications By- Fred Halsall (PEARSON)

AN 2205 Animation Techniques II

(Post Production)

13.13 Adding effects
13.14 Adding motion blur
13.15 Previewing the entire animation
13.16 Review questions and answers

Chapter 14: PARTICLES **4**

14.1 Introduction to particles & UI
14.2 Adding Particles to a scene
14.3 Particles in 3D Scene
14.4 Creating Effects using Particles
14.5 Using Particle Presets
14.6 Previewing & Rendering Particles
14.7 Basic Scripting in AFX

Chapter 15: RENDERING AND OUTPUTTING **3**

15.1 Creating templates for the rendering process
15.2 Creating templates for output modules
15.3 Exporting to different output media
15.4 Review questions and answers
15.5 Color Management in After Effects

Reference Books:

After Effects cs6 classroom in a book – author adobe creative team,
Pearson education

After effects cs5 in simple steps by Kogent Learning Solutions Inc – Wiley

AN2206 Production Process II

Chapter 1: Script Writing **(8)**

1.1 Introduction to Script writing
1.2 The language of cinema
1.3 Requirement for the script
1.4 Scenes & Shots

Chapter 2: Exposure Sheet **(5)**

2.1 Introduction to Exposure sheet/x-sheet
2.2 Preparing X – Sheets

Chapter 3: Staging **(6)**

3.1 Introduction to framing
3.2 Composting frame

Chapter 4: Story board **(10)**

4.1 Introduction to Thumbnails
4.2 The frame /Aspect ratio
4.3 Types of story boards
4.4 Scene and shots
4.5 Different types of camera angle
4.6 The language of storyboards

Chapter 5: DIALOGUE **(4)**

5.1 Introduction to Dialogue
5.2 How to write dialogues
5.3 Lip Sqc.

Chapter 6: ANIMATICS **(5)**

6.1 Preparing the Animatics
6.2 Preparing Animatics using Digital Software (Flash)

Chapter 7: Layout Design **(10)**

7.1 Technical and creative
7.2 Camera, Framing, Posing, Layout composing
7.3 Hook-Up, Pan Shot, Dynamic shot, Re-use, Cross Dissolve,
7.4 Match Moving, Loop Pan, Zip Pan, Expressions, Body Language.

Reference Books :

Storyboard Design Course by Giuseppe Cristiano ---- Barron's

How to write for Animation – Jeffery Scott- The Overlook Press Woodstock and New york

The Art of layout and storyboarding – Mark T.Byrne