DETAILED SYLLABUS

FOR

DISTANCE EDUCATION

BACHELOR OF SCIENCE

(Three Years Semester Scheme)

B Sc ANIMATION AND MULTIMEDIA

(BAMT)
## FIRST SEMESTER

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**Note:**

- **Theory Paper**: 40% Continuous Internal Assessment and 60% University examination.
- **Practical Paper**: 40% Continuous Internal Assessment and 60% University examination.

**Continuous Internal Assessment:**
1) Two or three tests out of which minimum two will be considered for Assessment
2) Seminars/Assignments/Quizzes
3) Attendance, class participation and behavior

60% of Continuous Internal Assessment

30% of Continuous Internal Assessment

10% of Continuous Internal Assessment
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

BASIC COMPUTER SKILLS

Sub. Code: AMT-101
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about the basic computing concepts and ability to use common software applications.


UNIT2: Block diagram of Computer: Diagram of computer and detailed significance of each part control unit, storage unit, main memory.


UNIT4: Software and types of software: Definition of software and types of software: application software, system software.


Text Book:-
1. Computers Fundamental by Pradeep K. Sinha, BPB Publication (India)
2. Introduction to computer by Alexis Leon, Mathew Leon, Vikas Publishing House Pvt Ltd (India)
3. Windows XP Simplified by Ruth Maran John Wiley & Sons Publication (India)
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

PRINCIPLES OF ANIMATION

Sub. Code: AMT-102
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of this subject is to impart strong knowledge about the fundamental principles of animation in addition to an invaluable appreciation for observational techniques & the art of planning.

UNIT 1: What is Animation: Its definition, early examples of Animation.

UNIT 2: History of Animation: Stop Motion Photo Animation, Zoetrope, Thaumatrope, Cell and Paper Animation, early Disney’s Cell Animation Processes.

UNIT 3: Types of Animation: Cell Animation, Stop Motion Animation, Computer Animation, 2-D Animation, 3-D Animation.

UNIT 4: Skills for an Animation Artist: Visual and creative development of an Artist, importance of observation with minute details, efficiency to draw gestures, facial expressions, good listener, hard work and patience, creative and innovative.

UNIT 5: Basic Principles of Animation: Illusion of Life, straight action and pose to pose Timing, Exaggeration, Drama and Psychological Effect, Fade in and Fade out, Squash and Stretcher, Anticipation, staging, follow through and overlapping action, Arcs, Solid Drawing, Appeal, slow in and slow out, Secondary Action.

UNIT 6: Various Terms: Animation Drawings/Cells, Rough Drawings, Clean ups, Color reference drawings, Layout, Model Sheet, Key Drawings and in Betweens, Master Background, Concept Piece, Character drawing, Story Board.

Reference book:-
1. Animation Unleashed by Ellen Bessen, Michael Weise Productions, 2008 (U.S.A)
2. The Animator’s Survival Kit by Richard Williams, Arrar Straus & Giroux Pub. (U.S.A)
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

DESIGN & COMMUNICATION PROCESS

Sub. Code: AMT-103
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE: To develop intellectual awareness and curiosity to acquire the knowledge necessary to sustain effective work in visual communication design.

UNIT 1: Basic Principles of composition: Introduction, What is composition, Why learn these principles, Fulfilling the purpose, The Subject: Selection and study, Drawing steps. Three Principles: Unity, Balance, Center of interest. Achieving Emphasis: Light and shade, Details, contrasts

UNIT 2: Six Visual elements: Color, Line, Shape, Value & Tone, Texture, Volume.


UNIT 4: Complementary relations between art & Design: Cognitive – Instrumental, Abstraction of the concrete – concretization of the abstract, Artist as notator – Designer as tool maker, Inductive, classificatory – deductive

UNIT 5: Pictorial principles: Contrast, Harmony, Emphasis, Movement, Proportion, Pattern, Variety, Rhythm, Repetition

Reference book:-
1) Design for communication: conceptual graphic design basics By Elizabeth Resnick, John Wiley & Sons pub. (India)
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

LAB ON BASIC COMPUTER SKILLS

Sub. Code: AMT-104 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart practical knowledge about the basic computing concepts and ability to perform the fundamental operating system functions.

UNIT 1: Practice on MS-Word: Making and formatting Documents, Inserting Pictures, Using spell check, Mail merge, Formatting Text, Using additional features.

UNIT 2: Practice on Ms-Excel: Manipulating cells, rows and columns, Create a new blank spreadsheet, Preview and print spreadsheet, Preparing Data Sheets.

UNIT 3: Practice on Ms-Power Point: Making Slides, Display the presentations in different views: slide show, normal and outline, Set up the presentations with manual delivery.

UNIT 4: Practice on internet: Mailing, Attaching file in mail, Searching and printing mail.

References books:-
1. Introduction to computer by Alexis Leon, Mathew Leon , Vikas Publishing House Pvt Ltd(India)
2. Windows XP Simplified by Ruth Maran John Wiley & Sons Publication (India)
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

PRINCIPLES OF ANIMATION LAB

Sub. Code: AMT-105
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - By studying this subject the students will discover the fundamental principles of animation & to exploit these fundamental principles to create convincing character motion.

UNIT 1: Using Animator’s Drawing Tools: The Animation Table (light box), Field charts, Line Testing Camera, Peg bar, Punching Machine.

UNIT 2: Rapid Sketching and Drawing: Drawing for Animation, Exercises and Warm ups on Pegging Sheet, Quick studies from real life, sequential movement drawing, caricaturing the action, thumbnails drawing for motion, The body language, Redefining Drawings.

UNIT 3: Developing a Animation Character: Incorporating various moods and shades of a character, various gestures and facial expressions of the character.

UNIT 4: Anatomy and Body Language: front, side and back view of the character, Anatomy and Body Language of the character, Caricaturing the character.

Reference book:-
1. Animation Unleashed by Ellen Bessen, Michael Weise Productions Pub.2008(U.S.A)
2. The Animator’s Survival Kit by Richard Williams, Arrar Straus & Giroux Pub.(U.S.A)
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

LAB ON DESIGN & COMMUNICATION PROCESS

Sub. Code: AMT-106  Credits: 02

Total Marks: 100  Minimum Pass Marks: 40%
Internal Assessment: 40 Marks  University Examination: 60 Marks

OBJECTIVE: To acquire and apply skills relevant to visual communication practice through project based learning in individual and teamwork situations.

UNIT 1: Compositing a 2-D Design: Using Different Geometrical shapes
UNIT 2: Color Combination: Making Color Wheel, Making composition with Colors.
UNIT 3: Floral Designs: Different patterns of design, making special occasion designs.
UNIT 4: Rule of third: clicking frames using golden rule or rule of thirds.
UNIT 5: Package designing: Designing packages for different objects/instruments (hand bags, pen, eatables, Mobile phones)

Reference book:-
1) Design for communication: conceptual graphic design basics By Elizabeth Resnick, John Wiley & Sons Pub(India).
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

EXPERIMENTAL ANIMATION LAB

Sub. Code: AMT-107
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE: The objective of the subject is to create vibrant and enthusiastic environment wherein students are guided through a multitude of experimental animation techniques to develop more diverse animation skills.

UNIT 1: Flip Books: Capture a series of images using your camera's continuous mode. Design your Flipbook, Printing the flipbook, Lay out the Flipbook pages, Arrange the pictures, Holding the end of the stack.

UNIT 2: Clay Animation: Designing Characters with Wax and Oil Based Clay

UNIT 3: Stop Motion Animation: using characters in stop motion animation.

UNIT 4: Set Designing: Experimental Work with different mediums like sand, stones, grass, hard board, pen and ink, water colors, poster colors, dry brush etc.

UNIT 5: Cut Out Animation: Making Cut Outs and capturing the images.

UNIT 6: Role of Puppets in Animation

Reference:-
1. The Encyclopedia of Animation Techniques, Richard Taylor, 1996 (India)
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – I

LAB ON BASIC ART

Sub. Code: AMT-108
Credits: 02
Total Marks: 100
Minimum Pass Marks: 40%
Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about the basic elements of the Art, Drawing including line, volume, space, texture and color.

UNIT 1: Visual and creative development of an Artist-(05%) Demonstration and lectures on required skills for an artist, difference between seeing and observing.

UNIT 2: Drawing and Sketching: Concept of drawing, free hand drawing exercises from object and nature to study proportion, volume and visual perspective, rapid sketching techniques, rapid sketching from live models, sketching from memory, live action.

UNIT 3: Various Mediums: Pencil Colors, Charcoal, Pen and Ink, Water Colors, Poster Colors, Oil Pastel Colors, other waste material such as and, stones, grass, hardboard, color papers & clay etc.

UNIT 4: Still Life: Study from any kind of form (basket, artificial fruits books, containers, bottles, round objects, drapery etc), still life with line as well light and shade. Rhythmic relationship between line, mass, value and texture; emphasis on variety of visual experiences.

UNIT 5: Anatomy Study: Simple free-hand drawing from human figure to study proportion. Centre of gravity, inclination of main masses based on anatomical structure.

UNIT 6: Memory Drawing and Outdoor Sketching: Exercises in drawing from memory to develop the sense of observation and the capacity to retain and recall images and their co-ordination Introduction to various aspects and techniques of drawing and sketching both indoor and outdoor.

Reference books:-
DETAILED SYLLABUS

FOR

DISTANCE EDUCATION

BACHELOR OF SCIENCE

(Three Years Semester Scheme)

B Sc ANIMATION AND MULTIMEDIA

(BAMT)
COURSE TITLE: B Sc ANIMATION & MULTIMEDIA (BAMT)
DURATION: 03 Years (Semester System)

SECOND SEMESTER

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Note:

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Continuous Internal Assessment:
1) Two or three tests out of which minimum two will be considered for Assessment
2) Seminars/Assignments/Quizzes
3) Attendance, class participation and behavior

60% of Continuous Internal Assessment
30% of Continuous Internal Assessment
10% of Continuous Internal Assessment
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – II

COMMUNICATION SKILLS

Sub. Code: AMT-201
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

UNIT I: Introduction: What is communication, Components of Communication, Barrier in communication
UNIT II: Kinds of Communication: Communication at work place, Importance and benefits of effective communication, Components/process of communication
UNIT III: Better public speaking and communication: The 7 c s of effective communication
UNIT IV: Various Skill: Reading Skill, Writing Skill, Speaking Skill, Listening Skill, Planning and Writing Documents
UNIT V: Written Communication: Business Letters, Report writing kinds of reports, Process of preparing effective business messages, Resume and cover letter to resume, Grammar style and punctuation
COLOR THEORY AND IMAGE GRAPHIC LAB

Sub. Code: AMT-202
Credits: 02
Total Marks: 100
Minimum Pass Marks: 40%
Internal Assessment: 40 Marks
University Examination: 60 Marks

UNIT I: Color Pallets: Mixing of primary secondary territory colors, tint, tones and shades, Color wheel
UNIT II: Color Schemes: Complementary, split complementary, analogues, warm and cool, Working in serials, Painting of the same scene
UNIT III: Color in practice: Color in advertising and graphic design, Colors used in Logos, prints Ads and Layouts.
UNIT IV: Application of color in print Media: RGB colors and CMK colors: Hue, Value, Intensity/ Chroma / Saturation, Spectrum
UNIT V: Image Designing: Expression of Graphic Designing Skills through different suitable Software for producing Digital Design, Manipulating Images by using Contrasts, Brightness, Hue, Saturation, Channel Mixer etc.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – II

2-D ANIMATION LAB

Sub. Code: AMT-203
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%
Internal Assessment: 40 Marks
University Examination: 60 Marks

UNIT I: Introduction: Logging onto server, Basic Macintosh Skill, Working in Flash, Drawing with Flash.
UNIT II: Basic Animation: Working in the timeline, How to animate, frame by frame, or using tweens.
UNIT III: Working with Symbol: Shape tween, Stagging animation effect
UNIT IV: Animation Review: Break apart and distribute, Intro to Motion Guide
UNIT V: Motion Guides path: Mask Layer, Button Intro, Intro to Scripting
UNIT VI: Setting up scenes for first project: Button and action scripting project, How to effectively plan an animation project
UNIT VII: Application Secondary Motion: Walk Cycle, Run Cycle, Managing Layers
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – II

INTRODUCTION TO 3-D LAB

Sub. Code: AMT-204  
Credits: 02

Total Marks: 100  
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks  
University Examination: 60 Marks

Objective: The main objective of this subject is to study the importance of 3-D images in creation of animation movies and its various aspects.


UNIT II: Introduction to Autodesk 3DS-MAX: Interface of Autodesk 3DS-MAX, Understanding material editor & Render Global, Unwrapping polygon objects, Working with edit poly & Edit Mesh, Animation option- Timeline & Time slider, Introduction to lights and shader, Application of materials on objects.

UNIT III: Introduction to Autodesk Maya: Interface of Autodesk Maya, Basic tools of Modeling, Basics of UV Texture Editor, Working with Outliner & Hyper shade Window, Basic Skills of Lighting, Creating Props with Basic Shapes, Understanding Polygon, NURBS, Sub div. Modeling

UNIT IV: Exercises of Autodesk 3DS-MAX & MAYA: Creating wall by using box parameters, Creating some architectural features like arcs & front elevation by cloning, Modeling a interior using by default geometrick 3d objects, Creating and editing material by using all concepts of mapping, Making light basic light rigs for interior and exterior lighting, Making basic shades like wood, metal, plastic etc.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – II

CELL ANIMATION-1 LAB

Sub. Code: AMT-205
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

Objective: The main objective of the subject is to impart the practical knowledge about the Classical/Cell Animation processes and techniques such storyboarding, composing layouts, Backgrounds and various principles of 2D-Animation.

UNIT I: Using Cell Animation Equipment: Light Box, Peg Bar, Punching Sheets, Fixing Sheets etc., Line Testing Camera, Various drawing pencils, Sketch pens/inks etc,

UNIT II: Cleaning-up Exercises: Drawing/Sketching of animation drawings from live actions, Cleaning-up the Animation Drawings, Inking/Coloring of Clean-up Drawings.

UNIT III: Making a Story Board, layout, Model Sheet and Master Background: What is story Board, Use and importance of story Board in film making, Making Story Boards for Small Animation Sequences. Composing a Layout/Frame. Creating a Model Sheet and Master Background.

UNIT IV: Principle of Stretch and Squash: Drawing Key Frames and In Betweens for Stretch and Squash Action. Principle of Timing to be Kept in mind.

UNIT V: Principle of Exaggeration: Drawing key Frames and In Betweens for Exaggeration action of an Animated. Principle of Timing to be Kept in mind.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – II

COMPUTER PROGRAMMING

Sub. Code: AMT-206 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

UNIT I: Programming Paradigms and programming Languages: Background of Programming Languages, Programming Tools, program Structure, Syntax and Semantics.

UNIT II: Data Representation: Number System, Conversion of number from one number system to another, data types (Life and Scope).

UNIT III: Control Statements: Decision making statements (all variants of if and Switch), Conditional Control Statements (break, continue, go to) and Loop Statement (for, while, do-while).

UNIT IV: Logic Building and Algorithms: Need of problem solving by various program design tools like Flowchart, Algorithms and Pseudo codes.


UNIT VI: Data Structure: Introduction to various data structures used in various Programming Languages like Arrays, Stack, Queues, Linked Lists.

UNIT VII: Overview of Networking: Various types of Network Topologies, LAN,MAN,WAN, Broadcasting/Multicasting, IP Addresses

Text Books:
DETAILED SYLLABUS

FOR

DISTANCE EDUCATION

BACHELOR OF SCIENCE

(Three Years Semester Scheme)

B Sc ANIMATION AND MULTIMEDIA

(BAMT)
COURSE TITLE: B Sc ANIMATION & MULTIMEDIA (BAMT)
DURATION: 03 Years (Semester System)

THIRD SEMESTER

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Note:

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Continuous Internal Assessment:
- 1) Two or three tests out of which minimum two will be considered for Assessment 60% of Continuous Internal Assessment
- 2) Seminars/Assignments/Quizzes 30% of Continuous Internal Assessment
- 3) Attendance, class participation and behavior 10% of Continuous Internal Assessment
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – III

WEB DESIGNING TECHNOLOGIES

Sub. Code: AMT-301
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the basic understanding of the methods and techniques of developing a web site.

UNIT I: Introduction to the Internet: Modes of connecting to internet, search optimization on internet, applications of internet, introduction to World Wide Web (WWW).

UNIT II: Introduction to HTML: HTML tags, HTML Editor.

UNIT III: Tags, Attributes, Lists and Tables: Structure Tags (HTML, HEAD, TITLE, BODY), Paired and unpaired tags, Ordered list, unordered list, formatting list, tables in HTML, formatting table, cell spacing, cell padding

UNIT IV: Links and Images: Making hyper links- anchor tag, images as link, Adding Images, Aligning the image Using Images as a link, Using Background images.

UNIT V: Cascading Style Sheets: Style sheet design, using internal and external style sheets

UNIT VI: Creating a Basic Web Page: Creating web pages using basic HTML Tags.

UNIT VII: Typography: Composition, Font selection

UNIT VIII: Text rollovers: Text rollover techniques and applications


Text Book:
• Mastering HTML 4 – Deborah ray ,Pub.- Sybex Inc.
• Web Design for dummies – Lisa Lopuck, Pub.- For Dummies.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – III

ANIMATION - MODELING LAB

Sub. Code: AMT-302 Credits: 02
Total Marks: 100 Minimum Pass Marks: 40%
Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about 3D Modeling using Maya.

UNIT1: Introduction to Nurbs Modeling: Nurbs Modeling overview & its use.
   Nurbs components.

UNIT2: Nurbs Curves: Types of Curves, Curve creation, Curve Editing,
   Applications of Curves .

UNIT3: Nurbs Surfaces: Nurbs primitives, Surface creation, Revolve, Extrude,
   Loft, Boundary, Birail, Applications of Surfaces.

UNIT4: Introduction to Polygon Modeling: Polygon Modeling overview &
   Usefulness, Polygon primitives & components, topology, edge flow


Practicals /Submissions
  • Props: Inorganic objects, Character accessories
  • Vehicle Model: Car Modeling, Bike Modeling, War Vehicle
  • Character Model: Cartoon Character Body Modeling, Cartoon Character Face
    Modeling, Hyper Realistic Body, Quadruped Modeling

References:
1) Mastering Maya 2009 by Eric Allen, and Anthony Honn ,Pub.-SYBEX
2) Edge loop Character Modeling For 3D Professionals Only by Kelly Murdock,
   Pub.- Wiley
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – III

FUNDAMENTALS OF PRE-PRODUCTION

Sub. Code: AMT-303
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge of animation pre-production pipeline & workflow.

UNIT1: Introduction to Pre-production: The basics of Pre Production, Importance of pre Production in creating a Project.

UNIT2: Concept, Story writing: Developing a Concept for Animation, Essentials Elements of a story: Start, Middle and Ending of a story

UNIT3: Screenplay: Definition and Elements of Screenplay, Creating a Screenplay.


UNIT5: Props & Environment development: Props & Environment illustration, Blueprint.

UNIT6: Storyboarding: Process of creating storyboard, Importance of storyboard in Film making.

UNIT7: Visual references: Types of visual references.

UNIT8: Dubbing, Songs, Process of Dubbing of Dialogues , Voiceovers, songs etc.

Practicals/Submissions:
1. Concept for a Short Animation Movie.
2. Screenplay for a Short Animation Movie.
3. Story Board using Storyboarding Software.
4. Small Project (minimum 5 minutes) of Dubbing/Song/Dialogue Recording.

Text Book:
• How to write for animation – Jeffrey Scott, Pub.- Overlook TP
• Animation writing & development – Jean Wright, Pub.-Focal Press.
• Animator’s Survival kit – Richard Williams,Pub.-Faber and Faber.
• The Illusion of life – Frank Thomas,Pub.- Disney Editions.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – III

DIGITAL FILM MAKING LAB

Sub. Code: AMT-304 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart practical knowledge about non-linear editing and how it can be used for film & television editing & post-production.


UNIT2: Shooting a Clip/Footage: Outdoor, Indoor, Landscapes, live action.

UNIT3: Software used in Editing: Fundamentals of non-linear & digital Audio/Video editing

UNIT4: Role of an Editor in Film making: Do’s and don’ts of Editing, working on an Editing Table, Project setting, Clips management, Timeline Settings & Controls, Tools.

UNIT5: Audio Track Editing: Audio Editing [Normalization, Mixing, Cross-fading, Dynamics, Filters, Mono/stereo formats, Noise gate.

UNIT6: Editing the Footage: Importing clips, trimming clips, splitting clips, manipulating audio content, adding transitions, changing speed of a clip, changing opacity, applying special effects, superimposing an image, exporting a movie.

Practicals/Submissions
• Small Footage (Short Film) (5-10minutes)
• Minimum 30 Sec well edited Television Commercial
• Clips with A/V Sync & transitions.

References books:-
2) Adobe premiere pro Bible by Adele Droblas, Pub.-Wiley.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – III

PRINT & ADVERTISING GRAPHIC DESIGN LAB

Sub. Code: AMT-305 Credits: 02
Total Marks: 100 Minimum Pass Marks: 40%
Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about Print & Advertising Graphic design & its applications.


UNIT5: Brochure / Pamphlet/Leaflet Designing: Designing Brochures for an Advertising Agency, Educational Institutions, Animation Company.

Practical/Submissions
(Software to be used Photoshop, Adobe Illustrator, Corel Draw)
c. Poster Design: Poster for an Animation Movie.
d. Brochure: 3-Panel Brochure for Animation Institution/Studio.

Reference books:
• Advertising by Design: Creating Visual Communications with Graphic Impact by Robin Landa, Publisher- Wiley.
• Creative Advertising by Mario Pricken, Publisher-Thames and Hudson.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – III

CHARACTER ANIMATION 1 LAB

Sub. Code: AMT-306 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about animation in Maya.

UNIT1: Introduction to Animation in Maya: Maya’s usefulness for animation and its advantages, Animation related interface of Maya and animation preferences

UNIT2: Tools used for Animation in Maya: Key framing, playback and play blast, Introduction to Tangents, Graph editor, Dope sheet.


UNIT4: Timing, Spacing, Overlapping, Slow in, Slow out, In betweening: How to adjust, increase and decrease timing & spacing, Understanding & application of overlapping, Tangent editing.


UNIT6: Applying principles of animation: Applying animation principles to object like bouncing ball.

UNIT7: Character Jump Animation: Pre-production, Execution

UNIT8: Character walk cycle animation: Pre-production, Execution

Practical/Assignments:
1) Bouncing Ball (With Stretch and Squash and proper timing).
2) Character Jump Animation.
3) Character walk cycle animation (Simple and Attitude walk).

Reference:-
1) Animator’s Survival kit – Richard Williams, Pub.-Focal Press.
2) Timing for Animation – Harold Whitaker, Pub.-Focal Press.
3) Cartoon Animation – Preston Blair, Pub.-Walter Foster.
4) Animation : The Mechanics of Motion – Chris Webster,
DETAILED SYLLABUS

FOR

DISTANCE EDUCATION

BACHELOR OF SCIENCE

(Three Years Semester Scheme)

B Sc ANIMATION AND MULTIMEDIA

(BAMT)
COURSE TITLE: B Sc ANIMATION & MULTIMEDIA (BAMT)
DURATION: 03 Years (Semester System)

FOURTH SEMESTER

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<td>History of Motion Picture Industry</td>
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<td>Animation – Rigging Lab</td>
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Note:

Theory Paper: 40% Continuous Internal Assessment and 60% University examination.
Practical Paper: 40% Continuous Internal Assessment and 60% University examination.

Continuous Internal Assessment:
1) Two or three tests out of which minimum two will be considered for Assessment 60% of Continuous Internal Assessment
2) Seminars/Assignments/Quizzes 30% of Continuous Internal Assessment
3) Attendance, class participation and behavior 10% of Continuous Internal Assessment
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – IV

ESSENTIALS OF EXECUTION & POST-PRODUCTION

Sub. Code: AMT-401
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about Animation execution, workflow & post-production

UNIT1: Modeling: Types of 3D Modeling, Advantages & Disadvantages of Nurbs modeling & Polygon Modeling.
UNIT2: Texturing : UV texturing: Texturing of Characters and Props, Shading: Different Maya Shaders.
UNIT3: Lighting: Sources of light: Natural and artificial Lights, Types of lights in Maya, Types of Shadows in Maya.
UNIT4: Rigging: Joints, Inverse Kinematics, Forward Kinematics, Types of Skinning.
UNIT5: Animation: Types of Animation.
UNIT6: Rendering: Process, Types of Renderer.
UNIT7: Data Management: How to manage 3D Assets
UNIT8: Compositing: Process, Tools used
UNIT9: Visual Effects: Process, Tools used
UNIT10: Music & Dubbing: Process, Tools used
UNIT11: Editing: Process, Tools used
UNIT12: Output: Types of Output format.

Textbooks:
• Maya Documentation
• Digital compositing for film & video by Steve Wright
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – IV

VIRTUAL SET DESIGNING LAB

Sub. Code: AMT-402
Credits: 02
Total Marks: 100
Minimum Pass Marks: 40%
Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - This course aims to equip students with fundamental knowledge in the creation of Photo Realistic 3D assets. The module also focuses on texture acquisition/creation, digital lighting, Rendering Techniques such as Ray tracing, Global Illumination and Caustics. Students will be required to apply what they have learnt to their 3D scenes.

UNIT I: Introduction to 3DS Max & Interface: Modeling, texturing, advanced lighting, animation.

UNIT II: Basics of AutoCAD: Making basic Geometric shapes, Complete Basic CAD drawings, with borders, text and dimensions, Use Paper Space, and Model space, Edit drawings with ERASE, OOPS, COPY, EXTEND, TRIM, MIRROR, UNDO, REDO and MOVE commands

UNIT III: Introduction to Adobe After Effects: Introduction to the After Effects interface, Effects, Parenting, Masking, 3D, Lights and Cameras, Expressions, Painting, Motion tracking


UNIT V: Rendering: Concepts of Rendering, Scan Line Rendered.

Practical’s/Submissions
1. Textures and layouts for 3D production.
2. Object modeling. 3. Virtual set.
4. Credit sequences (for films and animation).
5. 3D Animated Logo.
6. Architectural walkthroughs.

Reference books:-
• 3D Studio Max Bible – Kelly Murdock, Pub. - Wiley.
• Creating Motion Graphics with After Effects by Trish Meyer, Pub.-CMP Books
• Mastering AutoCAD 2011 and AutoCAD LT 2011 by George Omura, Pub.-Sybex.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – IV

CAMERA & LIGHTING TECHNIQUES LAB

Sub. Code: AMT-403
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge to illuminate the scene to produce a good quality as well as a pleasing picture with good camera sense.

UNIT1: Nature of light, light sources, Tree point Lighting, Lights & shadows in Maya, Ray tracing, Light Rig.

UNIT2: Mood & Ambience, Maya Software renderer, Introduction to Mental ray.

UNIT3: Indoor & outdoor lighting, Types of conventional cameras & its functioning, Lenses, exposure & focus.

UNIT4: Cameras in Maya, Shot planning, Motion Blur & Depth of Field.

Submissions:
1) Interior lighting (Day/Night).
2) Exterior lighting (Day/Night).
3) Character lighting.
4) Walkthrough.

Reference:
1) Maya Texturing & Lighting – Lee Lanier, Pub.-Sybex.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – IV

TEXTURING & SHADING LAB

Sub. Code: AMT-404 Credits: 02
Total Marks: 100 Minimum Pass Marks: 40%
Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about Texturing & Shading in Maya.
UNIT1: Texturing: Learning the Toolbar, Practice of creating basic textures, Basic Wrapping of textures onto surfaces, Concept of UVs. Difference between 2D maps and 3D maps, Tiling, Placing, Cropping, Transforming, Blurring etc., Planar, Cylindrical, Spherical, Adjusting Textures on NURBS surfaces, Polygon Projection Techniques, Basics of unwrapping the UVs., Transparency, Alpha layering, Raytrace Options, Matte Opacity, Making realistic textures.
UNIT2: Shading: Other types of shaders, Layered Shader, Shading Map, Utility nodes, Reverse Node, Applying two materials on either sides of a surface, 3D Paint, Painting various attributes like Color, bump. Transparency etc., Adding dust, dirt, rust etc. to an object. 9) Glossiness – Shading – Phong, Blinn, Phong E etc., Transparency – Reflection-refraction, Multilister and Hypershader, Mixing various Basic Shader Materials, Concept of Bump Maps, Creating bumps, ridges, grooves, dents etc

Practical’s/Submissions
1) Textured & Shaded Interior.
2) Textured character.
3) Textured Props.

Reference books:-
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – IV

HISTORY OF MOTION PICTURE INDUSTRY

Sub. Code: AMT-405
Credit: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about growth and development Motion picture industry.

UNIT I: Evolution of Cinema – the early days.

UNIT II: Emergence of the narrative cinema and American, German, French and Russian Cinema in the era of silent motion pictures.

UNIT III: Advent of sound and color in motion picture, cinemas of the world in post salient motion picture era.

UNIT IV: Evolution of cinema in India and the current status.

UNIT V: Cinematograph Act 1952: Introduction and its role in Motion pictures Business.

UNIT VI: Significant Indian Films (Synopsis, Producer, Director, Actors.

UNIT VII: Evolution of Film Indian Animation Film Industry and its Growth.

UNIT VIII: Present scenario of Indian Film Industry.

Text books:-
2) Indian Cinema: The Bollywood Saga - Dinesh Raheja and Jitendra Kothari, Pub.- Roli Books
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – IV

ANIMATION – RIGGING LAB

Sub. Code: AMT-406
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE -  The main objective of the subject is to impart the practical knowledge about organic & inorganic rigging in Maya.

UNIT1: Rigging Basics, Bones and Joints, Skin, Binding, Kinematics (IK & FK), Requirements for a clean Model, Clean UVs, Binding, Smooth Binding, Rigid Binding.

UNIT2: Editing the Smooth Skin, Painting of Skin weights, Editing Skin weights, Mirror Skin Weights, Copy skin weights, Resetting Skin weights, Pruninging small weights, Normalizing Weights, Creating and Editing Flexors, Lattice, Sculpt, joint Cluster, Painting Cluster weights, Rigging the controls, Joints and hierarchies, Concept of Skeleton.


UNIT4: Stickiness, Switching between IK/FK, Adding the controls and attributes, Grouping and Parenting, Rigging a arm and hand, Advanced rig.

Practical’s/Submissions
• Basic Vehicle Rig.

References books:-
1) An Introduction to Rigging in the Entertainment Industry (Applications & Techniques)
2) Art of Rigging by George Biddlecombe, Pub.- Dover Publications by Chris Higs, Pub.- Entertainment Technology Press Ltd.
DETAILED SYLLABUS

FOR

DISTANCE EDUCATION

BACHELOR OF SCIENCE

(Three Years Semester Scheme)

B Sc ANIMATION AND MULTIMEDIA

(BAMT)
COURSE TITLE: B Sc ANIMATION & MULTIMEDIA (BAMT)
DURATION: 03 Years (Semester System)

FIFTH SEMESTER

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Note:

Theory Paper: 40% Continuous Internal Assessment and 60% University examination.
Practical Paper: 40% Continuous Internal Assessment and 60% University examination.

Continuous Internal Assessment:
1) Two or three tests out of which minimum two will be considered for Assessment
2) Seminars/Assignments/Quizzes
3) Attendance, class participation and behavior

60% of Continuous Internal Assessment
30% of Continuous Internal Assessment
10% of Continuous Internal Assessment
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – V

FUNDAMENTALS OF AESTHETICS

Sub. Code: AMT-501 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about complete and theoretical studies of Aesthetics.


UNIT2: History of Indian Aesthetics: Five Schools, Bharatmuni, Natyashashtra,


UNIT4: Six types of Bhavas: The principle study of Bhavas like: Unruffled feeling, Comrade feeling, Servant-Master attitude, Mother Child feeling, Loved-Beloved feeling, Oneness with God.

UNIT5: Applied Media Aesthetics: What is Applied Media Aesthetics, Fundamental Elements of Applied Media Aesthetics, difference between Applied Media Aesthetics and Traditional Aesthetics.

References:
1. Indigenous Aesthetics: Native Art, Media, and Identity by Steven Leuthold (University of Texas Press), Publisher- University of Texas Press.
2. Art Beauty and Creativity: Indian and Western Aesthetics by Shyamala Gupta, PublisherD K Print World.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – V

TELEVISION GRAPHICS & ANIMATION LAB.

Sub. Code: AMT-502 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about television Graphics & Animation.


Unit 4: Rendering of Graphic: Mental Ray Techniques, Layer Based Rendering, Global Illumination, Final Gather, Caustics.

Unit 5: Compositing: Introduction to Tools, Color Keying, Color Correction, Montage, Channel Ids, Composting CG with Live Footage.

Submissions:
- A short Clip Advertising/News Logo (Motion Graphics).

SOFTWARE: Autodesk 3-D Max, Autodesk Maya, Adobe After Effects, Adobe Premier Pro.

Reference:
1. 3-D Movie Making : Stereoscopic Digital Cinema (By: Bernard Mendiburu) Publisher: Focal Press
2. 3-D Filmmakers: Conversations with Creators of Stereo(By: Ray Zone) Publisher: The Scarecrow Press
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – V

MEDIA THEORY

Sub. Code: AMT-503 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about Media and various Media Theories.

UNIT1: General Introduction: Film and TV, Theory of Production & Consumption of Media Content.

UNIT2: Theories of Spectatorship, Feminism and Film Theory, Reception Theory.

UNIT3: Film Genres, Advertisements, Film Criticism.

UNIT4: Film Theory, Media and Cultural Theory, Video – Everyday uses of Video, Video Art and Digital Video, Transformation of Consumer to User.

Books
1. Movies & Methods: Vol. 1 & 2 by Bill Nichols, Publisher-University of California Press
2. Modern Criticism and Theory by David Lodge, Publisher- Longman
3. Concepts in Film Theory by Dudley Andrew, Publisher- Oxford University Press.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – V

ACTING & DIRECTING FOR ANIMATION LAB

Sub. Code: AMT-504  
Credits: 02

Total Marks: 100  
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks  
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about acting and directing for Animation Films.

UNIT1: Essential of Acting Concepts:

ACTING
• Basic Performance skills, physical preparation.

VOICE, SPEECH & MUSIC
• Exercises that focus on breathing, humming, pitch, volume and singing.

IMPROVISATION & ACTING
• Through improvisation, both silent and word-oriented, learning to see, hear, believe, react, observe and concentrate.

UNIT2: Facial expressions & Lip Synchronization:
• How to use Character’s body, voice and imagination?
• How to be aware of Character’s body, facial expressions and to concentrate on its rhythm, enter space and loosen their limbs
• Acquiring acting skills through sessions focused on an understanding of the self.
• Mimicking & Voice Modulation.

UNIT3: Directing Animation:
• Developing a Story for Animation, Scripting & Storyboarding.
• Fundamentals of Cinematography – Camera Angles, Lighting & creating mood, Shots, Screenplay.

Submissions
• Animation with dialogue & expressions (minimum one minute).

References books:
• Acting for Animators – Ed Hooks Publisher: Heinemann Drama; Revised edition
• The artist’s complete guide to facial expressions – Gary Gaigin Publisher: Watson-Guptill
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – V

DIGITAL COMPOSITING LAB

Sub. Code: AMT-505
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about Digital compositing & post-production of various media.


UNIT 2: Introduction to Adobe After Effects: Learning the toolbar, Introduction to the interface of the Adobe After Effects, Compositing the real life shoot with CG (Computer Generated) characters or Environment, Blending of CG (Computer Generated) lights & cameras with real shoot.


UNIT 4: Key framing, Transitions: Basics of key framing (whether the video is in PAL or NTSC.), How to move & copy key frames, Animate the key frames, Adding the key frames, Learning about the transition effect & transition completion, Learning transition gallery.

UNIT 5: Video Effects & Motion: Color correction in video, Creating virtual animated backgrounds, Visual Effects Using Various Plug-in, Text animation in Adobe After Effects, Virtual cameras, lights, Leaning the uses of particles, & dynamics, Different types of effect making like fire, dust, etc.

UNIT 6: Audio Effects: Sound Recording & Editing, Audio capturing & Synchronization, Controlling Pitch and tempo, Merging with the scenes, Encoding.

UNIT 7: Chroma Keying: Basics of chroma keying, What is Blue/Green Screen Imaging, Why Blue/Green color be used?, Lighting Chroma Key Properly, Green screen, Blue screen removal, Wire removal.
UNIT 8: Output: Learning supporting output video formats, Work with output module settings, Rendering and exporting, Render Queue panel, Encoding & compression options for movies, Rendering final movie, Video & audio Editing & merging.

Submissions
- 30 sec composited project.
- Clips with video & audio effects.
- Clips with chroma keying application.

References:
- Adobe After Effects Documentation.
- Digital compositing for film & video by Steve Wright Publisher: Focal Press
- Professional digital compositing by Lee Lanier. Publisher: Sybex; Pap/Dvdr O edition
- Adobe after effect visual effects & compositing by Mark Christiansen Publisher: Adobe Press
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – V

PROJECT-I

Sub. Code: AMT-506 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to make a short animation film by students as their Individual Show reel. The student is required to make a Show reel/Individual Project of minimum 2 Minutes. The student can choose between the following options:
a. Motion Graphics.
b. 3-D Animation.
c. Digital Compositing.
DETAILED SYLLABUS

FOR

DISTANCE EDUCATION

BACHELOR OF SCIENCE

(Three Years Semester Scheme)

B Sc ANIMATION AND MULTIMEDIA

(BAMT)
### COURSE TITLE

**B Sc ANIMATION & MULTIMEDIA (BAMT)**

**DURATION**: 03 Years (Semester System)

### SIXTH SEMESTER

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**Note:**

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**Practical Paper**: 40 % Continuous Internal Assessment and 60 % University examination.

**Continuous Internal Assessment:**

1) Two or three tests out of which minimum two will be considered for Assessment

2) Seminars/Assignments/Quizzes

3) Attendance, class participation and behavior

60% of Continuous Internal Assessment

30% of Continuous Internal Assessment

10% of Continuous Internal Assessment
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – VI

PUBLICITY DESIGNING AND MEDIA LAWS

Sub. Code: AMT-601 Credits: 02
Total Marks: 100 Minimum Pass Marks: 40%
Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about Publicity Designing, promotion of Projects/Products which plays an important role in the success of the Project. The other part of the subject is to impart knowledge about the Film Criticism /developing reviews.

UNIT 1: Various Mediums of Publicity: Print Media – Newspapers, Magazines, Brochures, Posters, Leaflets, Pamphlets, Danglers, posters etc., Outdoor Advertising – Hoardings, Cutouts, Bus Panels, Posters, Electronic Media – Audio(Radio ,FM), Audio-Visual (Television), Internet- Websites, Online advertising, Blogs, Banners, Emails, Cinema, Exhibitions, Trade Fairs,


References Books:-
1. Truth, Lies and Advertising : The Art of Account Planning by John Steel, Publisher - Wiley.
2. Bare Acts of Indian Copyright Act, Contempt of Court Act.
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – VI

SPECIAL EFFECTS IN FEATURE FILMS LAB

Sub. Code: AMT-602 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%

Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the practical knowledge about how to make special effects for feature films.

UNIT 1: Essential concepts of Special effects: Visual or Special Effects and Concept, Design about ideas and concept generation for the film and games industries - ranging from characters, vehicles, products, clothing, sets and environments. The content may be historical, contemporary or future-based ie ‘visions’ of society, lifestyles, environments as the game/film plot dictates.

UNIT 2: Special effects planning: Overview of story boarding of effects, planning and managing the test shot and research about techniques. Paint, Retouch & Wire removal (20%): The complete and advance study of the usage of paint and brush tools like brush, clone, stamp, eraser and wire removal to suspend an actor or prop in mid-air.

UNIT 3: Camera Matching, Tracking & Stabilizing: The study of Image stabilization consists in compensating for the camera motion by applying a suitable transformation (warping) to the image. In the stabilized image, scene points are motionless in spite of camera motion.

UNIT 4: Maya render passes & 3D compositing: The study of render passes or diffuse or specular passes can even be rendered or composite on a light basis to increase the degree of post-control.

UNIT 5: Combining live action & CG: The study of combining computer generated character or an object with live camera footage.

Submissions
• Clips with Special effects (minimum 01 minute)

References books:
• Special effects : The History & Techniques – Richard Rickitt Publisher: Watson-Guptill
• Adobe after effects CS4 Visual effects & compositing studio techniques - Mark Christiansen. Publisher: Adobe Press
• Maya Visual effects : The innovator’s guide – Eric Keller Publisher: Sybex
• Maya Documentation
• After Effect Documentation
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – VI

INTRODUCTION TO GAME DESIGNING LAB

Sub. Code: AMT-603 Credits: 02

Total Marks: 100 Minimum Pass Marks: 40%
Internal Assessment: 40 Marks University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to impart the knowledge about 3-D Game Art Designing.

UNIT 1: Game Art designing fundamentals: Basic concept of game designing, Character sketching, concept of character developing.

UNIT 2: Game character & Environment design: Modeling a base mesh in Maya, concept of topology, Environment devolving.

UNIT 3: Introduction to Z brush: User Interface, over view of tools, shortcuts, Import & Export of mesh

UNIT 4: Detailing the base mesh into Z brush: Tools and Technique for detailing the mesh

UNIT 5: Normal Maps: Overview of Normal maps, import & Export of normal maps

UNIT 6: Z-brush – Maya Integration: Overview of z-brush and Maya integration

UNIT 7: Texturing: Process of texturing for game, UVW mapping, Texture making (using Photoshop)

UNIT 8: Baking maps: Overview of Baking maps, process for baking maps

UNIT 9: Light Baking: Overview of Light Baking, process for baking Lights

UNIT 10: Scene Optimization: Overview of scene optimization, process for optimization

UNIT 11: File Import Export: The concept of file importing and Exporting

Submissions
• Low poly Game Character
• Environment of Exterior
• Environment of Interior

References books:-
• Game Design: Principles, Practice, and Techniques - The Ultimate Guide for the Aspiring Game Designer – Jim Thompson Publisher: Wiley
• Creating Game Art for 3D Engines – Brad Strong Publisher: Charles River Media
• Max Documentation
• Creating the Art of the Game – Matthew Omernick Publisher: New Riders Games
• Introducing Zbrush – Eric Keller Publisher: Sybex
• ZBrush Digital Sculpting Human Anatomy – Scott Spencer Publisher: Sybex
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – VI

ANIMATION DYNAMICS LAB

Sub. Code: AMT-604
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE -  The main objective of the subject is to impart the practical knowledge about dynamics & physics simulation in Maya.

UNIT 1: Introduction to Dynamics: The Overview of Fur menus, hair, Ocean locators and wakes, n Particles, Ultimate Fluid.

UNIT 2: Hair & Fur: The time will spend more with the core node of the system of Hair and Fur description. The process will go through of the loading the plugin of fur and go through each of the attribute one b one in the fur and hair description.

UNIT 3: Cloth: Overview of Nucleus node, Realistic cloth simulation, Scene scale and settings, time scale, Mass, Dynamics forces, Friction, rigidity, Passive object collisions, glue strength, Pressure, Tearing Surfaces, Caching n cloth, Deformation Resistance.

UNIT 5: Introduction to n Particles: n Particles is the robust toolset for simulating complex physics simulations and an intuitive workflow for creating liquids, clouds, smoke, spray and dust effects using n Particles.

UNIT 6: Introduction to Ultimate Fluids: It is used for to create realistic fire effects; Navier-strokes fluid solver; Spring mesh fluid solver, interactive fluids with particles, advanced heat dynamics, combustible fluids, soft surface simulations, realistic liquid simulations.

UNIT 7: Introduction to Paint Effect: Popular highlights include toon rendering, mesh brush, optimizing scene, light based effects, control curves based effects, secondary animation, custom brushes.

Submissions:-
• Character Hair.
• Waving Flag.
• Character Cloth.

References books:-
• Maya Documentation
• Maya Studio Projects: Dynamics – Todd Palamar Publisher: Sybex
SYLLABUS
B Sc. ANIMATION AND MULTIMEDIA
SEMESTER – VI
PROJECT - II

Sub. Code: AMT-605
Credits: 02

Total Marks: 100
Minimum Pass Marks: 40%

Internal Assessment: 40 Marks
University Examination: 60 Marks

OBJECTIVE - The main objective of the subject is to make a short animation film by students as their Project Show reel so that the student can be easily assimilated in the Industry. The students can choose the area of Specialization keeping in view their interest.
For Specialization Project/Show reel (AMT-605) the students will have choice between the following Specializations:
A. Short Animation Movie (2-D /3-D).
B. Special Effects (VFX) Short Movie.
C. Advertising Campaign (Short Ad Film/Print Media).
D. Promotional Material (Promotional film, Brochure, Hanging, Posters)
Note: The students shall work partly in the college and partly in the concerned Industry.