

**Deccan Education Society's
FERGUSSON COLLEGE (AUTONOMOUS),
PUNE**

Syllabus

for

**S. Y. B. Voc. (Digital Art and
Animation)**

[Pattern 2019]

*(B. Voc. Digital Art and Animation
Semester-III and Semester-IV)*

From Academic Year

2020-21

Deccan Education Society's
Fergusson College (Autonomous), Pune

S.Y.B.Voc. Digital Art and Animation (Pattern 2019)

From academic year 2020-21

Particulars	Name of Paper	Paper Code	Title of Paper	No. of Credits
S.Y. B.Voc Digital Art and Animation. Semester III	Theory Paper - 1	BVA2301	Script Writing	4
	Theory Paper - 2	BVA2302	Digital 2D Animation	4
	Theory Paper - 3	BVA2303	3D Modeling, Texturing and Rendering	4
	Practical Paper - 1	BVA2304	Practical in Digital 2D Animation	6
	Practical Paper – 2	BVA2305	Practical in Production Process II	6
	Practical Paper - 3	BVA2306	Practical in 3D Modeling and Texturing	6
S.Y. B.Voc Digital Art and Animation. Semester IV	Theory Paper - 1	BVA2401	Web Design	4
	Theory Paper - 2	BVA2402	3D Rigging and Animation	4
	Theory Paper - 3	BVA2403	Motion Graphics and Compositing	4
	Practical Paper - 1	BVA2404	Practical in Sculpting	6
	Practical Paper – 2	BVA2405	Practical in 3D Rigging and Animation and Lighting.	6
	Practical Paper - 3	BVA2406	Practical in Motion Graphics and Compositing	6

S.Y. B.Voc Digital Art and Animation Semester III

Subject: Script Writing Paper -1 (BVA2301):

[Credits-4]

Course Outcomes

At the end of this course, students will be able to

- CO1** Student should understand the importance of script in the process of pre production.
- CO2** To make the student enable to think from script writing point of view.
- CO3** Student should learn about script writing style and to analyze any Audio Visual content Script.
- CO4** To enable the pre production phase from ideas into script.

Unit	Details	Lectures
I	Introduction to Storytelling 1.1 What is Storytelling 1.2 Types of Storytelling 1.3 Pre- Production Process	[6]
II	Narrative Techniques 2.1 What is narration? 2.2 Narrative Structure 2.3 Narrative treatment of the space & time	[6]
III	Development of Script 3.1 Idea and Concept Development 3.2 Character Development (Internal& External Features, Wants vs Needs, Obstacles, Stakes & Character Arc) 3.3 Character Psychology 3.4 Three act Structure 3.5 Visual treatment to a script	[6]
VI	Script Formats and their style 4.1 Scene heading 4.2 Parenthesis 4.3 Description 4.4 Scene Transition 4.5 Basic Idea of Shooting Script 4.6 Screenplay Structure (Screenplay Template)	[8]
V	Elements of Script 5.1 Story premise 5.2 Theme 5.3 Plot 5.4 Style and tone 5.5 Structure of Scenes/ Chronology	[8]
VI	The basic of dramaturgy 6.1 The Nature of Conflict 6.2 Types of conflicts	[6]
VII	Different Genre of script 7.1 Genre include action, children, comedy, crime, drama, family, history, horror, romance, science fiction, teens and thriller 7.2 How to write a Synopsis	[5]

Reference Book:

1. Save a cat by Blake Synder
2. A directors method for Film & Television by Ron Richards

S.Y. B.Voc Digital Art and Animation Semester III

Subject: Digital 2D Animation Paper -2 (BVA2302):

[Credits-4]

Course Outcomes

At the end of this course, students will be able to

- CO1** Get knowledge of limited digital 2d animation.
- CO2** Get knowledge of industrial 2d animation workflow.
- CO3** Create layout design for 2d animation using software
- CO4** Create character animation using 12 principles of animation

Unit	Details	Lectures
I	Introduction to Software. 1.1 Overview of digital 2d animation 1.2 Introduction to digital 2d software. 1.3 FPS 1.4 Introduction to Concept of Limited Animation	[5]
II	Introduction to the interface 2.1 Tool s required for animation 2.2 Document setup 2.3 Introduction to drawing and drawing tools	[8]
III	Timeline 3.1 Introduction to Frames, Key frame, Hold 3.2 Onion Skin 3.3 Motion Guide 3.4 Motion Path 3.5 Guide 3.6 Orient to path	[8]
IV	Property Inspector 4.1 Library 4.2 Different type of Symbols 4.3 Graphics 4.4 Movie clip 4.5 Button	[8]
V	Types of animation techniques 5.1 Shape tween 5.2 Shape Hints 5.3 Classic tween 5.4 Frame by frame animation	[8]
VI	Timeline effects 6.1 Rotoscopy in Flash 6.2 Shockwave file	[8]

Reference Book:

Adobe Animate CC Classroom in a Book 2018 by Pearson Author Russell Chun

S.Y. B.Voc. Digital Art and Animation Semester III

Subject :3d Modeling, Texturing and Rendering Paper -3 (BVA2303)

[Credits-4]

Course Outcomes

At the end of this course, students will be able to

- CO1** Model and texture complex interior, exterior model on their own.
- CO2** Students will be well versed with realistic lighting and latest rendering techniques.
- CO3** They will be able to animate the camera and create nice walkthroughs.
- CO4** Students will be able to undertake individual projects and deliver best quality output.

Unit	Details	Lectures
I	Intro to 3d and Basic Interface Common used Tools Common used Operations	8
II	Interior Modeling – Hall/Bedroom Character Modelling	8
III	Materials and Hypershade Types of mapping Making Complex materials	9
IV	Animating Camera Paint Effects Lighting setup and type of lights 3 Point light system Animating Lights	10
V	Rendering Concept and setup Arnold Render System Making an Interior with character (Basic pose) and rendering with Arnold.	10

Books-

1. Autodesk Maya 2019 Basics Guide
2. Digital Lighting and Rendering (Voices That Matter) 3rd Edition- By Jeremy Brin
3. Digital Modeling ([digital]) 1st Edition- By William Vaughan
4. Advanced Maya Texturing and Lighting

S.Y. B.Voc Digital Art and Animation Semester III

Subject: Practical in Digital 2D Animation Paper -IV (BVA2304):

[Credits-6]

Course Outcomes

At the end of this course, students will be able to

- CO1** Understand tools, layout and timeline.
- CO2** Create limited animation using 2d animation software.
- CO3** Create digital character animation using 2d software.
- CO4** Create digital character animation using Audio and animation principles.

List of practicals (Compulsory 10 + 2 Activity)

	PAPER CODE: ANI2304 PAPER –: Animation Practical [Credit -4: No. of Practical 10]
1	Bouncing ball/ bouncing ball with tail/ bouncing ball with different weight
2	Character animation - Jump
3	Character animation - Walk
4	Character animation –run
5	Walk cycle – quadruped
6	Run cycle – quadruped
7	Character animation – Dialogue base on 12 principles
8	Character animation – Dialogue base on 12 principles
9	Character animation – Dialogue base on 12 principles
10	Character animation – Dialogue base on 12 principles

S.Y. B.Voc Digital Art and Animation Semester III**Subject: Practical in Production Process II Paper -V (BVA2305):****[Credits-6]****Course Outcomes**

At the end of this course, students will be able to

- CO1** Create work flow of animation short film.
- CO2** Create concept design/art for short animation film.
- CO3** Create Character design from real life.
- CO4** Get knowledge of storyboard and animatics.

List of practicals (Compulsory 10 + 2 Activity)

	PAPER CODE: ANI2305 PAPER –: Animation Practical [Credit -4: No. of Practical 10]
1	Concept Art
2	Prop Design
3	Prop Design
4	Character design (Male)
5	Character design (Female)
6	Character design (Child)
7	Layout Design
8	Layout Design
9	Story Board
10	Animatic

S.Y. B.Voc Digital Art and Animation Semester III

Subject: Practical in 3D Modeling and Texturing. **Paper -VI (BVA2306):**

[Credits-6]

Course Outcomes

At the end of this course, students will be able to

- CO1** Model and texture both organic and inorganic models.
- CO2** They will be able to create interiors and exteriors sets required in films and television.
- CO3** They will be well versed with prop modelling, car modelling and Hair & Fur systems.
- CO4** They will also be able to model and texture both Biped and Quadruped creatures.

List of practicals (Compulsory 10 + 2 Activity)

	PAPER CODE: BVA2306 PAPER –: Animation Practical [Credit -4: No. of Practical 10]
1	Interior Modeling and Texturing – Hall / Kitchen
2	Character Modeling and texturing – Human body
3	Exterior Modeling and texturing - A bridge over River / Tower of Pisa
4	Props Modeling and texturing – Sword/ Gun
5	Props Modeling and texturing – Sword/ Gun
6	Animal Modeling and texturing
7	Animal Modeling and texturing
8	Car Modeling and texturing
9	Making Hair / Fur for Animals
10	Show reel of the above Topics

S.Y. B.Voc Digital Art and Animation Semester IV

Subject: Web Technology, **Paper -I (BVA2401):**

[Credits-4]

Course Outcomes

At the end of this course, students will be able to

- CO1** Get the knowledge of basics of HTML.
- CO2** Create simple and moderately advanced web pages.
- CO3** Design layout of web pages along with different styles.
- CO4** Design interactive web page with tools.
- CO5** Describe various server side technologies.

Unit	Details
I	Introduction <ul style="list-style-type: none"> 1.1 Concept of WWW 1.2 Internet and WWW 1.3 HTTP Protocol: Request and Response 1.4 Web browser and Web servers 1.5 Features of Web
II	HTML5 <ul style="list-style-type: none"> 2.1 Structuring an HTML Document - Elements and Attributes, Tags, The DOCTYPE Element 2.2 Creating and Saving an HTML Document, Validating an HTML Document, Viewing an HTML Document, Hosting Web Pages. 2.3 Understanding Elements 2.4 Working with Text 2.5 Defining the DIV Element and SPAN Element 2.6 Working with Links The target Attribute, The id Attribute 2.7 Creating Tables 2.8 Working with Images, Colors, and Canvas 2.9 Working with Forms 2.10 Working with Multimedia
III	CSS <ul style="list-style-type: none"> 3.1 Evolution, Syntax 3.2 CSS Selectors, Inserting CSS in an HTML Document 3.3 Backgrounds and Color Gradients in CSS 3.4 Font Properties 3.5 Creating Boxes and Columns Using CSS 3.6 Creating Boxes and Columns Using CSS 3.7 Effects, Frames, and Controls in CSS

IV	Dreamweaver 4.1 Introduction 4.2 Adobe Dreamweaver CS3 4.3 Text Styles 4.4 Images and Links 4.5 Symbols and Lines 4.6 Tables 4.7 Forms
V	Server Side Technology 5.1 HTTP Transactions 5.2 Multitier Application Architecture 5.3 Client-Side Scripting versus Server-Side Scripting 5.4 Accessing Web Servers

References:

1. Web Technology, black book (Kogent learning solutions inc.)
2. HTML5 black book: covers CSS3, Javascript, XML, XHTML, Ajax, PHP and Jquery

S.Y. B.Voc. Digital Art and Animation, Semester IV**Subject: 3D Rigging and Animation Paper -II (BVA2402):****[Credits-4]****Course Outcomes**

At the end of this course, students will be able to

- CO1** Create and understand rig system so as to make the creature/object ready to animate.
- CO2** They will be able to create different expressions of the creature as per the given mood of the scene.
- CO3** Create different animations like walk cycle, run cycle, fight, etc
- CO4** They will also be able to handle camera and animate it as per the shot.

Unit	Details	Lectures
I	Basics of Principles of Animation Bouncing ball-Setting Keys and Graph Editor Making Human Body ready for Rig Putting Joints and Renaming Putting IK Handles and Pole Vectors Inverse Foot with SetDriven keys Spine Control	[12]
II	Fist controller with SetDriven key Neck and Head controller Eyes Controller Master Controller Types of bind-Soft & Rigid Binding the character Paint Weights	[12]
III	Type of Blend Shapes Making Phonetics A,E,I,O,U,M,F Finalizing and Cleaning the Rig	[10]
IV	Walk cycle Run Cycle Dialogue between characters Fight Scene with Two Characters Animating Camera and render Sequence	[10]

Books-

1. Rig it Right! Maya Animation Rigging Concepts, 2nd edition- By Tina O'Hailey
2. Animation Methods: Rigging Made Easy : Rig Your First 3D Character in Maya Animation Methods - By David Rodriguez
3. Stop Staring: Facial Modeling and Animation Done Right - By Jason Osipa

S.Y. B.Voc. Digital Art and Animation Semester IV**Subject: Compositing and motion Graphics Paper -III (BVA2403):****[Credits-4]****Course Outcomes**

At the end of this course, students will be able to

- CO1** Learn the history ,different aspects and tools of motion graphics,
CO2 They will be able to create motion graphic videos widely used in Film, Television and Advertising sector,
CO3 They will also be well versed with all the available compositing techniques extensively used in films and television shows these days.
CO4 They will be able create titles and credits of film and television.

Unit	Details	Lectures
I	What is Motion graphics and its history Motion Graphics in Film & Television Different tools available for Motion Graphics What is Composition, Composition Settings and its principles	[12]
II	Introduction to layers & its types Importing, Exporting and Nesting Text animation Stroke Animation Rotoscopying/ Masking Chroma Keying	[12]
III	Wire Removal Tracking Color Correction & Color Grading 3d Projection	[12]
IV	Adding subtitles and Credits Creating Titles Using animation & Text presets Introduction to expressions	[11]

Books-

1. The Art and Science of Digital Compositing: Techniques for Visual Effects . By Ron Brinkmann
2. After Effects For Designers: Graphic And Interactive Design In Motion
3. Creating Motion Graphics with After Effects: Essential and Advanced Techniques - By Chris Meyer, Trish Meyer

S.Y. B.Voc. Digital Art and Animation Semester IV**Subject: Practical in Sculpting, Paper -IV (BVA2404):****[Credits-6]****Course Outcomes**

At the end of this course, students will be able to

- CO1** Students will be able to Sculpt and paint the Objects in sculpting software.
- CO2** Students can Import geometry from any 3D application into sculpting software.
- CO3** Students will be able to make customized stamp and stencils
- CO4** Students can pose any character using pose tools
- CO5** Students can export all Maps and geometry again into Maya /max.

List of practicals (Compulsory 10 + 2 Activity)

	PAPER CODE: BVA2404 PAPER –: Animation Practical [Credit -6: No. of Practical 10]
1	Ancient T-Rex Model sculpting and Painting using brushes
2	Future Reptile Model -sculpting and Painting
3	Future Reptile Model -sculpting and Painting
4	Props Modeling and sculpting
5	Props Modeling and sculpting
6	Props Modeling and sculpting
7	Alien Model sculpting using reference
8	Posing a character using inbuilt pose tools
9	Making a Badge in sculpting software using customized stamp and stencils
10	Making and Ancient coin using textures.

S.Y. B.Voc. Digital Art and Animation Semester IV**Subject: Practical in Animation , Paper -V (BVA2405):****[Credits-6]****Course Outcomes**

At the end of this course, students will be able to

- CO1** Rig both organic and inorganic objects,
- CO2** They will be able to rig humans, birds and animals,
- CO3** They will also be able to rig props and cars,
- CO4** They will be able to create dialogues with the help of blend shapes.

List of practicals (Compulsory 10 + 2 Activity)

	PAPER CODE: BVA2405 PAPER –: Animation Practical [Credit -6: No. of Practical 10]
1	Pendulum rig
2	Camera Rig
3	Car Rig
4	Human Rig
5	Blend Shapes
6	Animal Rig
7	Bird Rig
8	Make showreel of above topics

S.Y. B.Voc. Digital Art and Animation Semester IV**Subject: Practical in Animation VI, Paper -VI (BVA2406):****[Credits-6]****Course Outcomes**

At the end of this course, students will be able to

- CO1** Create titles and credits of films and television,
- CO2** They will be able to make motion graphics and typographic videos,
- CO3** They will be well versed with Stroke animation, whiteboard animation and other effects,
- CO4** They will learn all compositing techniques required in Post production process of a film.

List of practicals (Compulsory 10 + 2 Activity)

	PAPER CODE: BVA2406 PAPER –: Animation Practical [Credit -6: No. of Practical 8]
1	Making Subtitles
2	Making Creative titles
3	Making Creative titles
4	Making neon sign boards
5	Stroke effect animation
6	Chroma Removal from scene
7	Chroma Removal from scene
8	Wire removal from scene
9	Changing name plate
10	Make showreel of above topics