

FACULTY OF VOCATIONAL STUDIES

SYLLABUS FOR

**Bachelor of Vocation (Animation)
(Semester I-VI)**

**(Under Credit Based Continuous Evaluation Grading
System)**

Session: 2025-26



The Heritage Institution

**KANYA MAHA VIDYALAYA
JALANDHAR
(Autonomous)**

BACHELOR OF VOCATION PROGRAMME

PROGRAMME OUTCOMES: Students opting for Bachelor of Vocation (B.Voc.) Programmes on course completion/exit points will be able to:

PO1: get better job opportunities and can make informed choices due to enhanced skill-set owing to Industrial exposure through internships/ training in the specific work area of choice.

PO2: understand, develop, and observe work practices and ethics required to sustain and grow professionally in the industry concerned.

PO3: communicate messages effectively within a team as well as to business clients/customers through written communication such as email, letters, reports, memos etc and verbal communication like a telephonic conversation or PowerPoint presentation to a group.

PO4: adapt to the work environment and can work on time-bound assignments/projects individually or within a team, for a company or as a freelancer.

PO5: apply knowledge acquired during the course to update w.r.t changing Industrial requirements and stay relevant to the job-at-hand.

Programme Specific Outcomes: Students opting for Bachelor of Vocation (Animation) programme on course completion/exit points will be able to:

PSO1. Understand the animated or live film making process different stages i.e. pre production, Production Development, Post Production and distribution

PSO2. to Implement the use of storyboarding, Screenplay, Foundation Art, in essential pre production process to develop a film concept.

PSO3. Demonstrate & implement the knowledge of Principles of animation, graphic design, 2d animation, 3d modelling, texturing & Lighting, rigging & animation in Production process.

PSO4. To implement the use of audio editing, video editing, and VFX in Post –production

PSO5. Produce a portfolio of artwork that is research and development oriented, and that integrates the principles, techniques and skills acquired in the coursework. (Graphic design, 3d modelling, texturing & Lighting, rigging & animation, video editing)

PSO6. Gain real world project experience throughout their learning cycle, & Internships (Industry Exposure) that helps them to better understand the roles and processes in wide range of computer-generated design and animation careers.

PSO7. Enhance career prospects based on skill areas and make them employable in different segments of Media and Entertainment industry.

Scheme and Curriculum of Examination of Three-year Degree Programme

Bachelor of Vocation (Animation) Semester – I									
Session: 2025-26									
COURSE CODE	COURSE TITLE	COURSE TYPE	L-T-P		Marks				Examination Time (In Hours)
			L-T-P	Total	Total	Ext.		C A	
						L	P		
BVAL-142 1/ BVAL-103 1/ BVAL-143 1	Punjabi (Compulsory) / ¹ Basic Punjabi/ ² Punjab History and Culture	C	4-0-0	4	100	70	-	30	3
BVAM-1102	Communication Skills in English-I	C	4-0-0	4	100	50	20	30	3
BVAM-1113	Computer Fundamentals	S	1-0-1	2	50	20	15	15	3+3
BVAM-1114	Foundation Art	S	2-0-1	3	100	40	30	30	3+3
BVAM-1115	Principles of Animation	S	2-0-1	3	100	40	30	30	3+3
BVAP-1116	Creative Design-I	S	0-0-4	4	100	-	70	30	3
BVAP-1117	Experimental Animation	S	0-0-2	2	50	-	35	15	3
USEP-0001	Entrepreneurship Mindset Level-I	SEC	0-0-2	2	50	-	50	-	3
VACF-1491	* Foundation Course	VAC	2-0-0	2	50	35	-	15	1
	Total			24					

Note: C – Compulsory, S – Skill Enhancement, AC-Audit Course

1. Special paper on lieu of Punjabi (Compulsory)
2. Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab * Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Scheme and Curriculum of Examination of Three-year Degree Programme

Bachelor of Vocation (Animation) Semester – II									
Session: 2025-26									
COURSE CODE	COURSE TITLE	COURSE TYPE	L - T - P		Marks				Examination Time (in Hours)
			L-T-P	Total	Total	Ext.		CA	
						L	P		
BVAL-2421/ BVAL-2031/ BVAL-2431	Punjabi Compulsory) / ¹ Basic Punjabi/ ² Punjab History and Culture	C	4-0-0	4	100	70	-	30	3
BVAM-2102	Communication Skills in English-II	C	3-0-1	4	100	50	20	30	3+3
BVAM-2113	Scripting and Screenplay	C	1-0-1	2	50	20	15	15	3+3
BVAM-2114	2D Digital Animation	S	2-0-1	3	100	40	30	30	3+3
BVAP-2115	Introduction to 3D Modeling	S	0-0-2	2	50	-	35	15	3
BVAP-2116	Creative Design - II	S	0-0-3	3	100	-	70	30	3
BVAP - 2117	3D Modeling (Set and Props)	S	0-0-4	4	100	-	70	30	3
USEP-0002	Entrepreneurship Mindset Level- II	SEC	0-0-2	2	50	-	50	-	-
VACD-2161	*Drug Abuse and Ethical Education	VAC	4-0-0	4	100	70	-	30	3
	Total			28					

QPs at exit level 1: Graphic Designer (MES/Q 0601)/Animator-2D (MES/Q 0701) Note: C – Compulsory, S – Skill Enhancement, VAC-Value Added Course

1. Special paper on lieu of Punjabi (Compulsory)
2. Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab

* Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Scheme and Curriculum of Examination of Three-year Degree Programme

Bachelor of Vocation (Animation) Semester – III									
Session: 2025-26									
COURSE CODE	COURSE TITLE	COURSE TYPE	L-T-P		Marks				Examination Time (in Hours)
			L-T-P	I	Total	Ext.		C A	
						L	P		
BVAM - 3111	Introduction to Photography	C	2-0-1	3	100	40	30	30	3+3
BVAM – 3112	Storyboarding	C	2-0-1	3	100	40	30	30	3+3
BVAM – 3113	Color Grading	C	2-0-2	4	100	40	30	30	3+3
BVAP-3114	Introduction to Texturing and Shading in 3D	S	0-0-2	2	50	-	35	15	3
BVAP – 3115	Audio Editing	S	0-0-4	4	100	-	70	30	3
BVAP – 3116	Video Editing	S	0-0-4	4	100	-	70	30	3
BVAP – 3117	Motion Graphics	S	0-0-4	4	100	-	70	30	3
BVAP – 3118	3D Character Modeling	S	0-0-4	4	100	-	70	30	3
VACG-3532	Gender Sensitization	VAC	2-0-0	2	50	35	-	15	1
	Total			30					

Note: C – Compulsory

S – Skill Enhancement

VAC-Value Added Course

* Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Scheme and Curriculum of Examination of Three-year Degree Programme

Bachelor of Vocation (Animation) Semester – IV									
Session: 2025-26									
COURSE CODE	COURSE TITLE	COURSE TYPE	L - T - P		Marks				Examination Time (in Hours)
			L-T-P	Total	Total	Ext.		CA	
						L	P		
BVAL - 4111	Maintaining Workplace Health and Safety	C	2-0-0	2	50	35	-	15	3
BVAM - 4112	Camera Techniques	C	1-0-1	2	50	20	15	15	3+3
BVAP - 4113	Digital Compositing	C	0-0-2	2	50	-	35	15	3+3
BVAP- 4114	Lighting and Rendering	S	0-0-4	4	100	-	70	30	3
BVAP - 4115	3D Architecture Modeling and Texturing	S	0-0-4	4	100	-	70	30	3
BVAP - 4116	3D Animation	S	0-0-4	4	100	-	70	30	3
BVAI - 4117	Assignment and Viva (Application of Software Tools and Techniques)	S	0-0-6	6	100	-	70	30	3
VACE- 4221	Environmental Studies (Compulsory)*	VAC	2-0-0	2	50	35	-	15	3
VACM- 4502	Moral Education*	VAC	2-0-0	2	50	35	-	15	1
	Total			28					

QPs at exit level 2: Editor (MES/Q 1401)/ Modeller (MES/Q2501)

Note: C – Compulsory

S – Skill Enhancement

VAC-Value Added Course

* Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Scheme and Curriculum of Examination of Three-year Degree Programme

Bachelor of Vocation (Animation) Semester – V									
Session: 2025-26									
COURSE CODE	COURSE TITLE	COURSE TYPE	L-T-P		Marks				Examination Time (in Hours)
			L-T-P		Total	Ext.		C A	
						L	P		
BVAL-5111	Electronic Media	C	3-0-0	3	75	60	-	15	3
BVAM-5112	Career Management for Animation	C	2-0-1	3	75	40	20	15	3
BVAM-5113	Film Direction and Documentary	C	2-0-2	4	100		20	20	3+3
BVAP – 5114	Acting for Animation	S	0-0-3	3	75	-	60	15	3
BVAP – 5115	3D Architecture Lighting and Rendering	S	0-0-3	3	75	-	60	15	3
BVAP – 5116	Match moving Techniques	S	0-0-4	4	100 -		80	20	3
BVAP – 5117	3D Modeling for Gaming	S	0-0-4	4	100 -		80	20	3
BVAP – 5118	Digital Sculpting	S	0-0-4	4	100 -		80	20	3
*SECI-5541	Innovation, Entrepreneurship and Creative Thinking	AC	2-0-0	2	50	40	-	10	1
	Total			30					

* Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Scheme and Curriculum of Examination of Three-year Degree Programme

Bachelor of Vocation (Animation) Semester – VI									
Session: 2025-26									
COURSE CODE	COURSE TITLE	COURSE TYPE	L - T - P		Marks				Examination Time (in Hours)
			L-T-P	Total	Total	Ext.		CA	
						L	P		
BVAL - 6111	Publicity Designing and Media Laws	C	4-0-0	4	100	80	-	20	3
BVAL - 6112	CG and VFX Technologies	C	4-0-0	4	100	80	-	20	3
BVAP- 6113	Personality Enhancement	C	0-0-4	4	100	-	80	20	3
BVAI- 6114	Industrial Training and Report Writing	S	0-0-18	18	250	-	-	-	3
	Total			30					

QPs at exit level 3: VFX Editor (MES/Q3501)//Rendering Artist (MES/Q 3503)

Note: C – Compulsory

S – Skill Enhancement

Bachelor Of Vocation (Animation) Semester – I

Course Code: BVAM-1114

Foundation Art

Course Outcomes:

The objective of this course is to develop Visual and creative aspect of an Artist and teach required skills for an artist like proportion, perspective, anatomy study, light & shade, different sketching styles, different art mediums etc.

After passing this course the students will be able to:

CO1: Express their ideas both verbally and through drawings

CO2: Understand the use of proportion, volume, perspective, sketching from memory and 7 visual elements of art.

CO3: Apply light and shade and body proportion (anatomy) in drawings.

CO4: Will able to design cartoon characters, or a composition.

Bachelor Of Vocation (Animation) Semester –I**Course Code: BVAM-1114****Foundation Art**

L-T-P	Max. Marks: 100
2-0-1	Theory: 40, Practical:30
Time: 3 Hours	CA: 30

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

UNIT- I

BASICS: Visual and creative development of an Artist, demonstration, and lectures on required skills for an artist, difference between seeing and observing visual elements of Art Form, Shape, Line, Color, Space, Texture.

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.

UNIT- II

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.

STILL LIFE: Study of different forms (basket, artificial fruits books, containers, bottles, round objects, drapery etc.), still life with line as well light and shade.,

UNIT- III**HUMAN DRAWING:**

Introduction to human figure drawing –Drawings from Mannequin, quick Sketching of human figure Study of Ideal proportion of male and female figure with different ages, Focus on Head, Hand and Feet. Study of animal and birds with simple proportion.

PERSPECTIVE DRAWING:

Perspective Drawing, one point, two-point & Three Point perspective. Perspective as applied to objects, furniture, interior and exteriors of the buildings.

UNIT- IV

LIGHT & SHADE: The effects of lights on objects, the high light, middle tone and dark tone. Shading of geometrical shapes

COMPOSITION: Importance of composition in design, Basic rules of composition, Role of colors in composition, Rural and urban habitation, Poor and rich habitation.

Practical exercises to be implemented:

- Outdoor and indoor study human in action
- Study light and shade using still life,
- Different poses of human, animal, and birds
- Perspective Study (One Point, Two Point & Three Point)
- Create Character Design with personality

Note for the Practical Examiner:

- a) Practical Exam is based on the syllabus covered in the subject.
- b) The question paper will be set on the spot by the examiner.

Suggested Readings:

- a) Bancroft Tom, "Creating Character with Personality", Watson-Guption
- b) Victor Perard, "Anatomy and Drawing", Dover Publications
- c) Hart Christopher, "Modern Cartooning: Essential Techniques for Drawing Today's Popular Cartoons", Watson-Guption

Bachelor Of Vocation (Animation) Semester – I

Course Code: BVAM-1115

Principles of Animation

Course Outcomes:

In this course students get acquainted with the definition, meaning and types of Animation. The prime objective of the course is to help students to understand and apply principles that make animation more captivating by making it more realistic and life-like.

After passing this course the student will be able to:

CO1: Understand the different types of Animation ranging from Cell Animation, to Stop motion and now to present day CGI

CO2: gain and apply various skills a good animator must possess like observation of how things move, how humans express and emote.

CO3: understand the importance and application of various principles that make animation more life like and realistic.

CO4: demonstrate the application of these principles for beginner level exercises like pendulum, bouncing ball etc.

Bachelor Of Vocation (Animation) Semester – I**Course Code: BVAM-1115****Principles of Animation**

L-T-P	Max. Marks: 100
2-0-1	Theory: 40, Practical: 30
Time: 3 Hours	CA: 30

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

UNIT- I

Animation: Definition, Early examples of Animation, History of Animation: Stop Motion Photo Animation, Zoetrope, Thaumatrope, Cell and Paper Animation, early Disney's Cell Animation Processes

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

UNIT- II

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. Introduction to animation production process

UNIT- III

Basic principles in animation: Key framing and in-betweens, Timing and spacing, Squash and Stretch, Anticipation, Straight-ahead and pose to pose, Follow-through and overlapping action,

UNIT- IV

Basic principles in animation: Slow in and slow out, Arcs, Secondary action, Exaggeration, Solid drawing, Staging, Appeal

Practical: Exercises to be implemented:

1. Bouncing Ball Animation
2. Pendulum Animation
3. Flag Animation frame by frame
4. Hammering a Nail

Note for the Practical Examiner:

- a) Practical Exam is based on the syllabus covered in the subject.
- b) The question paper will be set on the spot by the examiner.

Suggested Readings:

Williams E. Richards, "The Animator's Survival Kit", Faber 3rd Edition.

Bachelor Of Vocation (Animation) Semester – I

Course Code: BVAP-1116

Creative Design-I

Course Outcomes:

The objective of this course is to acquaint students with the design process from idea conception, brainstorming, through to digital artwork for print and digital production process.

The application of design principles, use of colour, typographic principles and the best practices required for effective and appealing visual communication as required professionally are covered during the course.

After passing this course the student will be able to:

CO1: Identify and discuss design principles as they apply to visual communication. CO2: Use simple graphic design tools and techniques such as typography, color composition, masking and color correction.

CO3: Discuss graphic design processes and concepts with professionals in the field. CO4:

Work on simple projects like designing of banners, brochures, matte paintings, movie posters applying fundamentals of graphic designing

Bachelor Of Vocation (Animation) Semester – I**Course Code: BVAP-1116****Creative Design-I**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA: 30

Exercises to be implemented (in Adobe Photoshop)

1. Change the background of images
2. Image Manipulation
3. Transform & Distort images
4. Color adjustment of those images (Photo Retouching), creating / restore old images
5. Convert a B&W image into color (Use variation)
6. Make digital painting (Use brush, pencil, smudge etc.).
7. Matte Painting-Composition.
8. Designing movie posters or music album posters
9. Create logos
10. Design leaflet, business card, letter head, Magazine cover and banners
11. Create Gif Animation
12. Graphics for Social media platforms

Note for the Practical Examiner:

1. Practical Exam is based on the syllabus covered in the subject.
2. The question paper will be set on the spot by the examiner.

Syllabus to be covered for the practical:**UNIT- I**

Graphic designing and its objective, difference between raster and vector graphics, importing art work

Photoshop: Introduction to Photoshop and its interface, navigation and all tools, working with basic selections, advanced selections, Working with Layers.

UNIT- II

Tools:-Rectangular Marquee Tool , Move Tool , Polygon Lasso Tool , Magic Wand Tool , Crop Tool, Spot Healing Brush Tool , Healing Brush Tool ,Content aware tool , Patch tool, Brush Tool , Clone Stamp Tool ,Eraser Tool , Gradient Tool (, Blur Tool , Smudge tool , Dodge Tool ,Burn tool , Path Selection Tool , Text Type Tool , Pen Tool ,Rectangle Tool ,Notes Tool , Red eye tool,

UNIT- III

Photoshop: Refine edges,Grid and Guides, Adjustment Layers, Color Balance, Hue Saturation, Save Selection & Load selection.

Transformation tools (Distort, skew, perspective, warp), Vanishing point

Color Modes, Color Correction, Advanced color correction techniques (levels, Curves, Hue, Saturation etc.)

UNIT- IV

Masking: Quick Masks, Layer Mask, Layers & Layer Blending Modes.

Photoshop filters – Smart Filters, Filter Gallery,

GIF Animation and Timeline

Create images for the web: Exporting images from Photoshop

Suggested Readings:

1. Caplin Steve, “How to Cheat in Photoshop CC: The art of creating realistic photomontages”, Focal Press
2. Danae Lisa, “Adobe Photoshop CC Bible”, Wiley
3. Faulkner Andrew, “Adobe Photoshop CC Classroom in a Book”, Pearson Education

Bachelor Of Vocation (Animation) Semester – I

Course Code: BVAP-1117

Experimental Animation

Course Outcomes:

The primary objective of the course is to encourage students not only learn various tools but to develop a creative instinct.

While working on the assigned Project, the students will be able to:

CO1: Able to use storytelling and visual narrative to a project.

CO2: Use of paper cut outs, clay, and other materials for creating props

CO3: Create a Set and background for movies and animations

CO4: use of props and sets for creating realistic outputs.

Bachelor Of Vocation (Animation) Semester – I**Course Code: BVAP-1117****Experimental Animation**

L–T–P	Max. Marks: 50
0–0–2	Practical: 35
Time: 3 Hours	CA: 15

Instructions to the examiner:

The students will be working on a design project based on the subjects studied in the course.

The students need to submit the self-made project at the end of the semester. The marks will be awarded to the student based on quality, theme and creativity showcased in the project delivered.

Unit I

Storyboarding, Rules of making storyboard, Techniques of Storyboard. Principle of Staging and appeal. Understanding camera angles and shots for storyboarding. Creating original Characters.

Unit II

Animation, stop motion using (Video, Photograph, and Sketch, Objects, Cut-out), Paper Animation: Animation using paper shapes, Flip Book: Rules of making flip book, Techniques of flip book.

Unit III

Clay Modeling, Designing Character, Props using box and oil-based clay, Animation using Clay Characters and props

Unit IV

Set Creation, An Introduction to Experimental work using different medium like Stone, Grass, Sand, Hardboard, Pen and ink, Water Colors, Poster Color, Dry brush etc.

Suggested Readings:

1. Specc, Marc, (June 1, 2000), Secrets of Clay Animation Revealed 3, Create Space Independent Publishing Platform; Updated edition.
2. Robert Russet and Cecile Starr, (1976 (U.S.A), Experimental Animation: An Illustrated Anthology, Van Nostrand Reinhold Compare.

Bachelor Of Vocation (Animation) Semester – II

Course Code: BVAP-2113

Scripting and Screenplay

Course Outcomes:

The objective of this course is to acquaint students with the storyboard & screenplay process from idea conception, brainstorming, through to digital storyboard & traditional storyboard production process.

After passing this course the student will be able to:

CO1: Understand the concept, script and screenplay process.

CO2: Apply three-act structures in screenplay writing

CO3: Produce a series of cohesive storyboards from a script and identify the shots and camera movements.

CO4: Capable to Discuss Scripting and Screenplay process and concepts with professionals in the field.

Bachelor Of Vocation (Animation) Semester –II**Course Code: BVAM-2113****Scripting and Screenplay**

L-T-P	Max. Marks: 50
1-0-1	Theory: 20, Practical: 15
Time: 3 Hours	CA:20

Instructions for Paper Setter –

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

UNIT- I

Understanding Script Writing, searching for writing, writing for radio and television, Writing for Commercial, Elements of good script writing.

UNIT- II

Structure of Script, Genres of Script, Formats for Script Writing, Script breakdown, Storyboard for shoot, Laws for writing, role of a writer, qualities and responsibilities of a writer **UNIT- III**

Screenplay: Introduction, Script, Three Act Structure, Act One, Act Two, Act Three, Writing Synopsis (Treatment), Dialogue.

UNIT- IV

Formatting Script for Animation, Basic Guidelines for Animation Screenplays, Casting, Voice Over

Practical: Exercises to be implemented

1. Write a screenplay using 3-act structure
2. Convert a screenplay into Storyboard

(Traditional/Digital) **Note for the Practical Examiner:**

1. Practical Exam is based on the syllabus covered in the subject.
2. The question paper will be set on the spot by the examiner.

Suggested Readings:

1. Field Syd “Screenplay: The Foundations of Screenwriting”, RHUS; Revised ed. edition 2.
2. Vinod Chopra Films “3 Idiots: The Original Screenplay”, Om Books

Bachelor Of Vocation (Animation) Semester – II

Course Code: BVAM-2114

2D Digital Animation

Course Outcomes:

The objective of this course is to make students ready for creating 2D Animation applying the knowledge gained about fundamentals of designing, and principles of Animation studied in previous semesters.

After passing this course the student will be able to:

CO1: Identify and use various tools in Animate CC to create vector art and animate it CO2:

Design backgrounds with animated objects where characteristics like colour/position/shape change with respect to time

CO3: To understand the use of various symbols graphic, button and movie and their importance and usage w.r.t. various scenarios

CO4: Effectively use timeline, frames, and key frames to animate objects as well as characters

Bachelor Of Vocation (Animation) Semester –II**Course Code: BVAM-2114****2D Digital Animation**

L-T-P	Max. Marks: 100
2-0-1	Theory: 40, Practical: 30
Time: 3 Hours	CA: 30

Instructions for Paper Setter –

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT- I

Working with the drawing & shape tools, Drawing Shapes, Drawing with Primitive Tools, merge drawing mode vs object drawing mode, modifying shapes, direct selection tool, sub selection tool, gradient & mixing colors, 3d transform

Working with symbols, characteristics of symbols, editing symbols, buttons, button states, button library.

UNIT- II

Importing & modifying graphics, bitmap graphics & basic shape modification, working with vector objects, import photoshop file into Animate CC, working with text, modifying text properties, breaking text apart, converting text into shapes.

UNIT- III

Basics of animation, Timeline, Layers, animating text with shape tween, frames and keyframe, frame by frame animation, onion skin, motion tween, creating motion tween along path, working with motion editor

UNIT- IV

Implementation of 12 Principles of Animation, produce in-between poses for animation, Export the movie

Practical: Exercises to be implemented

1. Create Basic Text animation
2. Incorporate Audio with text
3. Create a background for animation
4. Bouncing Ball animation
5. Flag animation
6. Butterfly animation using path
7. Incorporate audio with character facial animation
8. Create a Cartoon character
9. Character walk cycle

Note for the Practical Examiner:

1. Practical Exam is based on the syllabus covered in the subject.
2. The question paper will be set on the spot by the examiner.

Suggested Readings:

Adobe Creative Team, “Adobe Animate CC Classroom in a Book Book”, Russell S. Chun
Beginning Adobe Animate CC: Learn to Efficiently Create and Deploy Animated and
Interactive Content

Bachelor Of Vocation (Animation) Semester – II

Course Code: BVAP-2115

Introduction to 3D Modeling

Course Outcome

This is an introductory course to learn Autodesk Maya 2015. This course is designed for anyone who wants to learn Autodesk Maya for the first time.

After successful completion of this course, the student will be able to: CO1: Understand the interface of Autodesk Maya (Viewports, Pivot, Transformation,) CO2: Model a simple object like a Chair or a table

CO3: Understand the process of texturing and applying color to the modelled object

CO4: Render a final image of simple objects like Chair and the Table.

Bachelor Of Vocation (Animation) Semester – II**Course Code: BVAP-2115****Introduction to 3D Modeling**

L-T-P	Max. Marks: 50
0-0-2	Practical: 35
Time: 3 Hours	CA:15

Practical Exercises to be implemented

1. Creating basic 3D objects
2. Creating 3d props using polygon modelling
3. Modelling 3d props and assets
4. Working with hyper shade to create materials
5. Apply basic materials and textures on 3d models

UNIT- I

Introduction to Maya, Understanding User Interface, understanding 3D Concept, setting up image planes and working in multiple viewports. Learning the difference between NURBS and Polygon modeling, using curves and Boolean techniques to create basic shapes.

UNIT- II

Polygon Modeling: Introduction to polygon modeling, Making hard surface objects and props like guitars, speakers, pen, watches and various house hold objects.

UNIT- III

Relationship editor and outliner, The channel box, Layer Editor, Attribute Editor, the connection editor, Duplicating objects duplicate with transform and duplicate special options, Pivot points, Grouping and Parenting, Working with Shelves, Using layers

UNIT- IV

Introduction to snapping (to grid, point, curves, and view planes), Helpline, command line, range slider, playback controls, preferences. Introduction to materials, Using hyper shade, Rendering a still, Rendering an image sequence

Suggested Readings:

1. Darakhshani Dariush, "Introduction to Autodesk Maya 2015". Autodesk
2. PalamarTodd, "Mastering Autodesk Maya 2016". Wiley

Bachelor Of Vocation (Animation) Semester – II

Course Code: BVAP-2116

Creative Design-II

Course Outcomes:

The objective of this course is to acquaint students with the design process from idea conception, brainstorming, through to digital artwork for print and digital production process.

The application of design principles, use of colour, typographic principles and the best practices required for effective and appealing visual communication as required professionally are covered during the course.

After passing this course the student will be able to:

CO1: Identify and discuss design principles as they apply to visual communication.

CO2: Use simple graphic design tools and techniques such as typography, color composition, masking and color correction.

CO3: Discuss graphic design processes and concepts with professionals in the field.

CO4: Work on simple projects like designing of banners, brochures, matte paintings, movie posters applying fundamentals of graphic designing

Bachelor Of Vocation (Animation) Semester – II**Course Code: BVAP-2116****Creative Design-II**

L-T-P	Max. Marks: 100
0-0-3	Practical: 70
Time: 3 Hours	CA: 30

Practical: Adobe Illustrator (Exercises to be implemented)

1. Leaflet Design
2. Business card
3. Letter head
4. Magazine cover
5. Banner design
6. Book Cover Design

Note for the Practical Examiner:

1. Practical Exam is based on the syllabus covered in the subject.
2. The question paper will be set on the spot by the examiner.

Syllabus to be covered for the practical:**UNIT- I**

Principles of design: Balance, proportion, Rhythm, Harmony and unity, Emphasis.

UNIT- II

Vector Graphics Designing: Introduction to Illustrator, Introduction to User Interface, Understanding tools. Create New file, Selection Tool [Intro] Selection Tool[working], Zoom VS increase size, zoom tool, Hand Tool, Resize objects, Scale Up/Down, Move, Rotate, Copy, Shift usage in creating objects. Direct Selection Path Anchor point Smart Guides Objects as Group Anchor Points Selection.

UNIT- III

Add joints, Pen Tool- Drawing, Smooth Curve Sharp Corner, Drawing Objects using Pen Tool, Symmetrical Shapes Ruler, Smart Guide Unlock/Lock Guides Reflect an Object Join lines as an Object Hide Guides, Fill/Stroke, Anchor Point Tool, Curvature Tool. Drag/Embed an image Layers Format Average/Join Shortcut key Eye Dropper Tool Shape Builder Tool Directed to selection tool

UNIT- IV

Layers Format, Average/Join, Shortcut keys, Eye Dropper Tool, Shape Builder Tool, Directed to selection tool, Gradients, Paint brushes/Stroke, Blob brushes/Fill, Brushes panel, Brush size increase/decrease, Pencil tool, Smooth tool, Path eraser, Shaper tool, Join tool, Eraser tool, Scissor tool, Knife tool, Two options to use rotate tool, Rotate objects on a specific angle, Scale Tool, Shear Tool, Reshape Tool and Free Transform Tool, Masking, kinds of Mask, Draw inside, Clipping mask, clipping mask on image, Embed image, Opacity Mask, Adding Mesh Points, Spreading and Contracting, Mesh, Managing Sharpe lines, at the end of color ,blend/gradient/shade, Outline Mode, Switching between Tools, Rectangle Tool usage, Rotate Tool usage, Rounded Rectangle Tool usage, Offset Path usage, Simple Gradient usage, Scale Tool usage.

Suggested Readings:

1. Adobe Creative Team, Adobe Illustrator CC Classroom in a Book 2. Brian wood ,Adobe Illustrator CC Classroom in a Book, Pearson Education 3. <https://www.youtube.com/watch?v=ZK86XQ1iFVs>

Bachelor Of Vocation (Animation) Semester – II

Course Code: BVAP-2117

3D Modeling (Set and Props)

Course Outcomes:

Students will use computer Maya modeling to explore the principles of 3-dimensional design. Projects involving object, character and architectural modeling will emphasize the aesthetic concepts of spatial proportion (scale, rotation, and position).

After successful completion of this course the student will be able to:

CO1: apply knowledge gained about the basic concepts and tools related to 3D production. (Low Poly & High Poly), loops, Polygon count etc.

CO2: comfortably use basic modelling techniques like Polygon modelling, Nurbs Modelling.

CO3: understand the fundamentals of 3D design

CO4: model set & Props ready for Texturing & Rigging.

Bachelor Of Vocation (Animation) Semester – II**Course Code: BVAP-2117****3D Modeling (Set and Props)**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA:30

Practical: Exercises to be implemented

1. Creating all types of Polygons like Cube, Sphere, Cylinder
2. Create Table Chair, Bed, and LED screen Using polygon
3. Create Flower pot and Guitar using NURBS
4. Creating 3d props and assets
5. Creating basic 3d set or environment
6. Rendering Model View using Default Render

Syllabus to be covered for the practical:**UNIT- I**

Understanding of 3d models, low poly models and high poly models, model sheet and reference images, using reference images for 3d modeling, creating image plane for reference, Create, edit, or position an image plane.

UNIT- II

Duplicating objects duplicate with transform and duplicate special options, Pivot points, Grouping and Parenting

Introduction to snapping (to grid, point, curves and view planes)

Basic Introduction to Creating of Simple primitives, surface normal,

Polygon Modeling, Polygons (edge, vertex, face, vertex face, UVs), Combining, and splitting, Polygon selection (object mode, sub-object mode: edge, vertex, face, vertex face, UV, edge loop, edge ring, border edge), Create polygon primitives (create polygon primitives interactively from shelf & from create menu), Move, rotate, or scale polygon components,

UNIT- III

Modifying polygon meshes (chamfer, split poly, insert edge loop tool, merge vertex, detach component, extrude, multi-cut, bridge, append to poly, combine, extract, triangulate, quadrangulate, create polygon tool, sculpt geometry, smooth, mirror geometry, Converting poly and subdivision.

UNIT- IV

What are Nurbs, Components of Nurbs curves, degree of Nurbs curves, Bezier curves. insert knot, reverse curve direction.

Loft, Revolve Surface, Extruded Surface, Planar Surface, Beveled Surface, Boundary Surface – Combining Techniques– Modeling with Deformers – Editing NURBS Surfaces – Using NURBS Surfacing to Create Polygons – Converting NURBS to Polygons

Suggested Readings:

1. Darakhshani Dariush, “Introduction to Autodesk Maya 2015”.
- Autodesk Palamar Todd, “Mastering Autodesk Maya 2016”. Wiley

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAM - 3111

Introduction To Photography

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: develop good understanding of different types of photography, various camera angles and shot

CO2: application of different elements of exposure and variation of each w.r.t another as the situation demands

CO3: understand and apply various composition techniques of photography

CO4: Learning about various composition rules used in photography

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAM - 3111****Introduction To Photography**

L-T-P	Max. Marks: 100
2-0-1	Theory: 40, Practical: 30
Time: 3 Hours	CA:30

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

Unit I

Introduction to photography, meaning of Photography and its applications

Types of Photography: Product Photography, Nature Photography, Event Photography, Travel Photography, Sport photography

Unit II

Camera Lens and its Types,

Aperture, Shutter Speed, Depth of Field, Types of Still Camera

Unit III

Different types of camera angles and shots

Camera angles and shots: Low angle, High angle, Dutch tilt, Ariel shot, Close up shot, mid shot, long shot

Unit IV

Composition: Rule of Thirds, Golden Section, Head room, Frame within a frame, Symmetry

Photography golden hours

Suggested readings:

1. Woods Nicole, "Photography: Complete Guide to Taking Stunning, Beautiful Digital Pictures". CreateSpace Independent Publishing Platform

2. Northrup Tony, "Tony Northrup's DSLR Book". Mason Press; 2nd edition

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAM - 3112

Storyboarding

Course Outcomes:

The objective of this course is to acquaint students with the storyboard process from idea conception, brainstorming, through to digital storyboard & traditional storyboard production process. After passing this course the student will be able to:

CO1: Understand the storyboarding process

CO2: Produce a series of cohesive storyboards from a script and identify the shots and camera movements.

CO3: Identify and state common preproduction workflow

CO4: Capable to discuss Storyboard, its process and concepts with professionals in the field.

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAM - 3112****Storyboarding**

L-T-P	Max. Marks: 100
2-0-1	Theory: 40, Practical: 30
Time: 3 Hours	CA:30

Instructions for Paper Setter –

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

UNIT- I**Storyboard:**

Introduction to Storyboard, different styles of storyboard, difference between storyboard and animatic, Advantages of Storyboard in Animation and Anatomy of a Storyboard

UNIT- II

Shot Types: Long Shot or Establishing Shot, Full Shot, Close-up, Medium shot, aerial shot, Extreme Close-up, Sequence, Scene, Shot, Camera Movements, Dialogue, Page Numbering, Flops **UNIT- III** Steps for a Great Storyboard, Medium and target audience, and how this may affect animation processes

Camera movements: -Pan, Tilt, Dolly/Track, Zoom in Zoom out, Whip Pan

UNIT- IV

Preparing Storyboards Using Digital Software: Animatics or Story Reel, Translate the script/story into a series of illustrated frames

Practical: Exercises to be implemented

1. Convert a screenplay into Storyboard (Traditional/Digital)
2. Application of various shots and Camera movements in Storyboard

Note for the Practical Examiner:

1. Practical Exam is based on the syllabus covered in the subject.
2. The question paper will be set on the spot by the examiner.

Suggested Readings:

1. Hart John “The Art of Storyboard”, Focal Press.
2. Simon A Mark “Storyboards: Motion in Art”, Focal Press.

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAM - 3113

Color Grading

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: Color grade of the footage to a specific mood and tone

CO2: knowledge of color theory and how it applies to color grading.

CO3: Trace over motion picture shots to make creative music video shots.

CO4: Create cohesive looks for footage and shots.

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAM - 3113****Color Grading**

L-T-P	Max. Marks: 100
2-0-2	Theory: 40 Practical: 30
Time: 3 Hours	CA:30

Instructions for Paper Setter –

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

Unit I

Learning techniques to color grade a film. Understanding 2 tones color grading, 3 tone and black and white. Pushing values and contrast. Using hue and saturation to change mid tones, shadows and highlights of a video and change moods.

Unit II

Learning about various digital formats including raw formats. Exploring an overview of various color spaces and related topics

Unit III

uses of contrast and color scene to Scene color grading - Matching shots within a scene, and keeping a look cohesive and consistent throughout a scene or entire project

Color Theory - exploring how color imagery is perceived within a single image and across a series of images. Contrast effects, color harmony.

Unit IV

visualizing and talking about color, Color Balancing: Exploring concepts of naturalistic color renditions, color casts, and balanced images. Color Grading: understanding 2 tones and 3 tones used by cinematographers to create the look of a film.

Practical: Exercises to be implemented

1. Study different movie shots for understanding colours
2. Compiling shots of different movies to represent their moods
3. Color correcting raw footage
4. Color grading raw footage

Suggested Readings:

1. Color Grading 101: Getting Started Color Grading for Editors, Cinematographers, Directors, and Aspiring Colorists a book by Charles Haine.

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAP - 3114

Introduction to texturing and shading in 3D

Course outcomes:

On the successful completion of the course students will be able to:

CO1: understand about the textures and materials in 3d CO2:

Understand about various texture parameters & attributes CO3:

Learning about UVs in texturing

CO4: working with UVs techniques used in 3d Texturing

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAP - 3114****Introduction to texturing and shading in 3D**

L-T-P	Max. Marks: 50
0-0-2	Practical: 35
Time: 3 Hours	CA: 15

Unit I

Introduction to texturing and shading, working with Shader - Blin, Phong and Lambert etc.

Working with Shader Properties - Ambient, Diffuse, Specular, gloss, opacity. **Unit II**

Working with Maps Bump and Opacity, Reflection & Refraction. Creating custom shaders in Maya using the hyper shade.

Unit III

Introduction to UV mapping, Types of UV Mapping Automatic UV mapping, Planar UV mapping, Cylindrical UV mapping, Spherical UV mapping, User-defined UV mapping, Camera UV mapping, Transfer UVs between meshes, UV Texture editor overview UV sets: Create UV sets, Switch between UV sets, Duplicate, rename, or delete a UV set, assign a texture to a UV set, Copy UVs from one UV set to another.

Unit IV

Editing UV's in Texture editor: Select UVs, Display a subset of UVs, Display a texture behind the UVs, Delete UVs, Update a texture image after UV modification, Use the UV Texture Editor grid, Save an image of the UV layout, Modify UVs using the UV Lattice Tool, Modify UVs using the UV Smudge Tool, Separate & attach UV shells, Relax UV's, Unfold a UV mesh, Flip or rotate UV shells, Copy UVs,.

Suggested Readings:

1. Lanier Lee, "Advanced Maya Texturing and Lighting", Wiley
2. Birn Jeremy, "Digital Lighting and Rendering", New Riders; 2 edition

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAP - 3115

Audio Editing

Course Outcomes:

CO1: working with audios using multi-track sessions.

CO2: create professional level sound outputs through waveform enhancements and fixing noise issues.

CO3: Recognize difference between amplitudes and frequencies and create a well edited sound for audio/video track.

CO4: Understand role of editor panel and sound editor.

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAP - 3115****Audio Editing**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA: 30

Practical: Exercises to be implemented

1. Study various audio files from advertisement and movies
2. Recording different audios
3. Recording audios in different file formats
4. Editing raw audio
5. Compiling final audio file for advertisement

Unit I

Introduction to Adobe Audition, Software Interface, setting up your project, Comparing the Waveform and Multi track editors, Basic components of the editors, working with audio in the Editor panel

Unit II

Recording Audio, Append audio files to another, import a file as raw data, insert an audio file into a multi-track session, supported import formats, Editing Audio: visually fading and changing amplitude, working with markers, converting sample types, frequency, and amplitude, Waveform editing enhancements.

Unit III

Sound Mixing, Mixing Pop Rock, Mixing Hip Hop, Mixing EDM, Foley, Reverb, Modify- Routing, Gain Structure, Automation, Master Harmonic Distortion, Metering, Mid & side, Referencing, editing dialogue,

Fixing hum and broadband noise issues with processing. Audio file formats and encoding **Unit IV**
Exporting Audio, EQ, Loudness Normalization &, Learn Compression, Panning, Level Balancing, Delay, EQ Types, Filters, Using Effects, Parameters, synchronizing sound effects (SFX). Exporting audio and video, format, rendering

Suggested Readings:

1. Film Sound: Theory and Practice - by Elisabeth Weis (Editor), John Belton (Editor)
2. Sound for Film and Television- Tomlinson Holman.
3. Audio Postproduction for Film and Video - Jay Rose

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAP - 3116

Video Editing

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: understand and apply the digital video production process: pre-production, shooting, editing, and post-production.

CO2: apply various video editing tools and techniques

CO3: work on a video editing project

CO4: understanding about exporting videos in various file formats for different platforms.

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAP - 3116****Video Editing**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA:30

Exercises to be implemented (Practical)

1. Synchronize text with audio
2. Create news ticker (lower third)
3. Mash up
4. Create a 1-minute trailer of movie
5. Create a one-minute short film

Syllabus to be covered for the practical:**Unit I**

Introduction: What is Premiere Pro, Why and What for, Concept of Non-linear editing. Digital video principles: Video formats, frame rates, aspect ratios and Video outputs Introductory project: Workflow, Adding footage, Time code, Basic, Interface of premiere pro, All panels of premiere (tools, project, monitor, source, Timeline, audio meters, misc.) Importing and organizing footage: Project, Sequence, Capturing, Importing, Sorting.

Unit II

Basic video editing: Rough editing, Layers, Ripple edit, Slip edit, Razor tool, moving edit, Navigating, understand all Tools on toolbox for editing clips.

Helpful editing techniques: Markers, replacing footage, exporting still, rearranging clips, Targeting, Disconnecting and Offline, Adjusting clip properties: Rubber band, Position, Anchor, Size, Playing with time: Speed, Rate, and Backwards

Unit III

Attributes of video: Pixels, Frame rates, HD

Creating moving elements: Layered, Animating and Fading.

Applying video transitions: Applying (various types), Effectively, Default.

Working with audio: Cutting music, Changing and fixing

Applying video effects: Flare, Lightning, Mirror, Making titles, credits and lower thirds

Various effects: adjust, blur, sharpen, channel, Distort, generate, image control, keying, noise, perspective, Stylize, time, transition, transform.

Unit IV

Basic compositing: Compositing, Green (keying)

Color correction: Color balance, color balance (HLS), three-way color corrector, brightness contrast, and Hue saturation Exporting video: Sequences, Media encoder, Formats

Suggested Readings:

1. Adobe "Adobe Premiere Pro CC Classroom in a Book", Pearson Education India

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAP - 3117

Motion Graphics

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: create various trendy assets for motion graphics

CO2: create typography animations using alphabetical animations

CO3: able to make cinematic titles

CO4: Use cameras to make interesting and dynamic animation

Bachelor of Vocation (Animation) Semester-III**Course Code: BVAP - 3117****Motion Graphics**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA:30

Practical: Exercises to be implemented

1. Creating basic Shapes and Text animation
2. Creating typography video of 1 minute
3. Create 1 minute motion graphics advertisement
4. Create 1-minute live action + motion graphics advertisement

Syllabus to be covered for the practical:**UNIT- I**

Working in Adobe after effects, effects like 3D, twitch, color boom, Distorted, particle etc., using the pre- composition and layers. Understanding Masking and overlaying multiple effects to create a dynamic looking effect.

UNIT- II

Creating Loops using coding, understanding timing, and spacing to create smooth transition effects. Creating custom transition effects and layer masks with color bleed effect.

UNIT- III

Creating Lyrical typography using alphabet wise animation in adobe after effects. Synchronizing timing and spacing and using the composition rules to create dynamic timing in animation. Understanding Keys and loops in after effects by coding. Using camera moves to further enhance the typography.

UNIT- IV

creating studio level product placement adverts. Composing 3D text in a footage to create cinematic typographical effect. Creating motion effects like the shock wave, synced with music. Making looped 3D pastel animated backgrounds.

Suggested Readings:

1. Design for Motion: Fundamentals and Techniques of Motion Design by Austin Shaw
2. Hands-On Motion Graphics with Adobe After Effects CC by Dodds David 3. The Graphic Language of Neville Brody Jon Wozencroft

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAP - 3118

3D Character Modeling

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: create character biped or quadruped

CO2: design clothes, props and hair style

CO3: understand different types of character modelling technique used in gaming, movies

CO4: understanding concept of cloths and hair modelling in 3d.

Bachelor of Vocation (Animation) Semester-III

Course Code: BVAP - 3118

3D Character Modeling

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA:30

Practical: Exercises to be implemented

1. Create biped character (Cartoon, realistic and semi realistic)
2. Create quadruped character

Syllabus to be covered for the practical:

UNIT- 1

Introduction to unit setup, model sheet for character modelling, Use of image plane in character modelling, blue prints and reference images, Anatomy study

UNIT- II

Basic Character modeling process, understanding of polygons, Tris and Quads, Instruction for character modeling (Poly count, T pose, Quad faces, loops)

UNIT- III

Understand the Cartoon, realistic and semi realistic character design, understanding the topology, low poly and high poly modeling

UNIT- IV

Creating clothes, hair and other character assets

Suggested Readings:

Todd Palamar, "Mastering Autodesk Maya 2016". Wiley

Darakshani Dariush, "Introduction to Autodesk Maya 2015". Autodesk

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAL - 4111

Maintaining Workplace Health and Safety

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: understand importance of Health and Safety at workplace, people responsible and supporting mechanisms

CO2: understand various workplace-related hazards, emergency situations CO3: observe safety guidelines and understand ways to handle natural and medical emergencies at workplace

CO4: will know various safety symbols, and Govt norms and regulation regarding health and safety

Bachelor of Vocation (Animation) Semester-IV**Course Code: BVAL - 4111****Maintaining Workplace Health and Safety**

L-T-P	Max. Marks: 50
2-0-0	Theory: 35
Time: 3 Hours	CA: 15

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

Unit I

Importance of High Standards of Health and Safety at workplace

Identification of health and Safety hazards

Identification of people responsible for health and safety and mechanisms to reach out to them **Unit II**

Ensuring the success of safety and health management system: monitoring, reporting various incidents and revision of plan.

Types of emergencies, Emergency plans, Evacuation and other emergency procedures in case of fire, flood, earthquake etc.

Unit III

Fire safety in the workplace, Different types of fire extinguishers, classification and usage

Medical assistance in case of health, symptoms and first aid for different medical conditions like cardiac failure, choking, unconsciousness etc.

Unit IV

Safety guidelines of System/equipment and machines, various safety symbols: meaning and importance.

Governmental norms and regulations regarding Health and Safety at workplace A fire drill exercise

Suggested Readings:

1. Schneid D. Thomas, "Workplace Safety and Health: Assessing Current Practices and Promoting Change in the Profession (Occupational Safety & Health Guide Series)", CRC Press; 1 Edition
2. Gupta A.K, "Industrial Safety and Environment Paperback", Laxmi Publications; Second edition

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAM - 4112

Camera Techniques

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: utilize various camera techniques, settings to the best as per requirement of the shoot

CO2: understand different type of angle and shots and how to take the same using camera

CO3: differentiate between various types of lighting and requirement of the same as per the shoot

CO4: handle the camera, its equipment and use of monitor during shoot.

Bachelor of Vocation (Animation) Semester-IV**Course Code: BVAM - 4112****Camera Techniques**

L-T-P	Max. Marks: 50
1-0-1	Theory: 20 Practical: 15
Time: 3 Hours	CA: 15

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section

Unit I

Digital Photography: Introduction

Camera Techniques and its uses

Different types of Color profiles (Natural, Portrait, Landscape etc.)

Unit II

Creative white balance

Nature Photography with different angles

Using Marcos in an indoor and outdoor setting

Different types of image and video format

Unit III

Time lapse shots

Image editing and standard image formats Advanced editing techniques in product photography

Lighting: Three point of lighting techniques, Types of lights used according to the shoot.

Unit IV

Travel Photography

Sport Photography

Crew: Handling the camera and its equipment, clapper board, use of monitor during shoot.

Picture Composition.

Note for the Practical Examiner:

1. Practical Exam is based on the syllabus covered in the subject.
2. The question paper will be set on the spot by the examiner.

Suggested Readings:

1. Woods Nicole, "Photography: DSLR Photography Secrets and Tips to Taking Beautiful Digital Pictures", CreateSpace Independent Publishing Platform

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAP – 4113

Digital Compositing

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: Learning about digital compositing software in the field of VFX.

CO2: working on a scene using keying and rotoscoping.

CO3: Create compositing shots with real footage

CO4: Learning about various output formats and codecs.

Bachelor of Vocation (Animation) Semester-IV**Course Code: BVAP – 4113****Digital Compositing**

L-T-P	Max. Marks: 50
0-0-2	Practical: 35
Time: 3 Hours	CA:15

Practical: Exercises to be implemented

1. Basic Compositing on footage
2. Working with chroma footage
3. Working with masking
4. Roto
5. Tracking footage
6. Compositing footage using tracking
7. Adding effects to the footage

Unit I

Adobe After Effects, Understanding User Interface, Understanding Project, Footage, Composition, Timeline.

Basic Animation Advanced Animation, Temporal Interpolation, Spatial Interpolation and Motion Paths, Motion Sketch and Smoothing.

Unit II

Layers & Compositing, Layers & Composition: Layers, **trimming** layers, Blending Modes and Adjustment Layers, Pre-Composing, Frame Rate, Time Stretch and Time Remapping, Masking, Parenting

Unit III

Text Animation, Text & Transitions: Animator, Advanced Text Effect, Pick Whip Expressions, Wiggle Expressions, Transitions.2.5D: Understanding 3D Space, animating in 3D Space, Lights, Camera, Using Effects and Stack order, Using Brainstorm, The Puppet

Unit IV

Effects, Effects and Rendering: Chroma & keying, Rotoscopy, Color Correction fundamentals, Blur and Sharpen Effects, Using Effects and Presets, Channels and other effects, Fundamental of Rendering, Output formats, Codec, Compression

Recommended Books / Suggested Readings:

1. Adobe Creative Team, Adobe Creative cloud: After Effects CC
2. The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics, Publisher: Morgan Kaufmann.

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAP – 4114

Lighting and Rendering

Course Outcomes:

On successful completion of this course the students will be able to:

CO1: understand the different type of lighting

CO2: light an interior or exterior

CO3: render properties and output

CO4: rendering output using Arnold in maya

Bachelor of Vocation (Animation) Semester-IV**Course Code: BVAP – 4114****Lighting and Rendering**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA:30

Practical Exercises to be implemented:

Lighting & rendering for the given scene

1. 3 Point lighting on a character
2. Lighting of an interior or exterior

Syllabus to be covered for the practical:

Unit I

Introduction to Lighting. Working with Maya Lights 1-Point, Direct, Spot, Working with Maya Lights 2-Ambient, Area and Volume, Three Point Lighting and Exterior Lighting, Cast shadows, decay rate, Previewing lighting and shadows

Lighting: Light and Shadow in real world – indirect vs global illumination – default lighting- direct light sources –reflection & refraction of light. Setup light source –spot, area or directional light

Unit II

Create, group & modify light in scene with light editor: create and group lights – snap lights to object. Adjust lighting: turn default light on or off – adjust light source attributes – control area lights – control spot lights – glows, halos, and lens flares – shadow catching – remove shadows.

Unit III

Image based lighting, Physical sun & sky, exposure photographic lens

Hardware, software, Using Arnold Render, Camera setup: create and use camera – camera – locking current camera – focus and blur – panning and zooming. Quality, render speed diagnostics – tessellation and approximation: rendering methods – Using different render passes render outputs: color and depth channels – file formats – output location – aspect ratio - render passes

Unit IV

Rendering: Working with cameras, Software & Hardware rendering. Execute Different render passes using Arnold.

Suggested Readings:

Todd Palamar, “Mastering Autodesk Maya 2016”. Wiley

Darakhshani Dariush, “Introductionto Autodesk Maya 2015”. Autodesk

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAP – 4115

3D Architecture Modeling and Texturing

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: Visualizing ideas, concepts and convert them into realistic 3D outputs.

CO2: creating 3D architectural models in 3d software

CO3: working with colors, textures, materials, lighting conditions

CO4: applying materials and textures on 3d models for final output

Bachelor of Vocation (Animation) Semester-IV**Course Code: BVAP – 4115****3D Architecture Modeling and Texturing**

L-T-P	Max. Marks: 100
0-0-4	Practical:70
Time: 3 Hours	CA:30

Practical: Exercises to be implemented

- 1. Modeling basic objects**
- 2. Polygon modelling**
- 3. Creating architecture model**
- 4. Applying materials and textures**

Syllabus to be covered for practical:**Unit I**

Understanding User Interface of Autodesk 3ds MAX, Standard Primitives, Extended Primitives, Customizing the Units, Basic Models using Parametric Deformers, AEC Extended objects, Advanced Set modeling- Buildings, Foliage-Exterior- Landscaping, 3D Boolean, Compound Objects, 2D Boolean.

Unit II

Modeling in 3Ds max, Understanding the Modifier Stack, Modeling with polygons and subdivision surfaces, Freeform sculpting, Modeling game assets to understand and grasp the basic concepts of modeling in 3DS Max. Linking objects in hierarchies.

Unit III

Architectural Modeling, Understanding the workflow of Architecture models, Interior Modeling, Exterior Modeling, Techniques used in Architectural modeling. Creating Game ready assets of fantasy and buildings and architecture.

Unit IV

Texturing and shading in 3Dsmax, Introduction to Texturing & Shading, building materials, texturing with bitmaps and procedurals, rendering a sequence.

Recommended Books / Suggested Readings:

1. Murdock, Kelly, 3D Studio Max Bible, Pub. - Wiley.
2. Daniele Todd, Poly-Modeling with 3ds MAX, Pub.- Focal Press
3. Autodesk 3ds Max 2021: Modeling Essentials, 3rd Edition by Pradeep Mamgain

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAP – 4116

3D Animation

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: effectively use timeline, frame rates and key framing for creating realistic animation

CO2: apply principles of animation to the 3d animation

CO3: animate a character with expressions, dialogues, and audio

CO4: animate character walk cycle

Bachelor of Vocation (Animation) Semester-IV**Course Code: BVAP – 4116****3D Animation**

L-T-P	Max. Marks: 100
0-0-4	Practical: 70
Time: 3 Hours	CA: 30

Practical: Exercises to be implemented

1. Maya Timeline, Manual key & Auto Key
2. Animation Graph editor
3. Play blast
4. Create a Walk cycle
5. Animating a character using Blocking Techniques
6. Creating an interaction between two characters
7. Creating a Character poses using blend shapes
8. Creating Anatomy of expression for facial Animation

Unit I

Animation Introduction, learning how to plan an animation using thumbnail sketches. Animating a cartoony pantomime shot with body mechanics acting utilizing the 12 principles of animation. Starting with poses, adding in-betweens and then breakdowns, then stretching the keyframes to setup the timing. Using the graph editor to polish the shot.

Unit II

Rigging, Understanding Skeleton Joints & Joint chain, Parent child Relationship, Understanding Joints and hierarchies & Concept of Skeleton. IK handle tool, IK Solvers & IK Spline. **Unit III** Intro to IK/FK, Arm & leg setup. Using constraints to setup up vehicle rigs and a character rig using blendshapes. Human IK and FK setup.

Unit IV

Dialogue animation, Focusing on facial animation to create a dialogue shot, a small dialogue first. Learning about human behavior, observing eyebrow movements, eye tracking and mouth poses, motion trails and graph editor. Learning about body language.

Suggested Readings:

1. Williams E. Richards, "The Animator's Survival Kit", Faber 3 edition. 2. Cartoon Character Animation with Maya: Mastering the Art of Exaggerated Animation (Required Reading Range)
3. Rodriguez David, "Animation Methods", CreateSpace Independent Publishing Platform

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAI – 4117

Assignment and Viva (Application of Software Tools and Techniques)

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: apply various tools and techniques studied during the first two years on a practical usage

CO2: While working on assignments, students learn the importance of delivering time-bound quality work

CO3: will get experience of specific requirements and outcome of different stages of any 2D/3D project

CO4: get to know how to tailor the project as per the target audience and make it more realistic and relevant

Bachelor of Vocation (Animation) Semester-IV

Course Code: BVAI – 4117

Assignment and Viva (Application of Software Tools and Techniques)

L-T-P	Max. Marks: 100
0-0-6	Practical: 70
Time: 3 Hours	CA:30

During Semester-IV, the students need to submit an animation assignment prepared using techniques and tools taught during the course (Adobe Photoshop, Adobe Illustrator, Corel Draw, Adobe Flash, Adobe Premiere, Autodesk Maya and Adobe After effects).

Following points should be taken care of while working on assignment:

1. Students can choose themselves the subject matter and scenes
2. A project can be done jointly by maximum of two students
3. Minimum of 750 frames
4. Use at least two different software
5. Effective use of cameras, focus on viewers' attention
6. A report showcasing the stages of the assignment undertaken

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAL - 5111

Electronic Media

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: comprehend different forms of electronic and print media CO2: how writing/broadcasting works on different types of media CO3: understand various roles and responsibilities of a production team CO4: understand various techniques ranging from editing, production to distribution.

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAL - 5111****Electronic Media**

L-T-P	Max. Marks: 75
3-0-0	Theory: 60
Time: 3 Hours	CA: 15

Instruction to the paper setter: Eight questions of equal marks (specified in the syllabus) are to be set, two from each of the four units. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question can be attempted from any of the sections.

Unit - I

1. Evolution and growth of Electronic Media (Radio, TV)
2. Characteristics of various Electronic Media (Radio, TV)
3. Radio vs. TV
4. Print vs. Electronic Media

Unit - II

5. Effect of Electronic Media on Culture and Society
6. Broadcasting Writing Technique and Style
7. Script Formats
8. Editing

Unit - III

9. Principles of Video Production
10. Basic TV Production Techniques
11. Production Team
12. Camera Crew

Unit - IV

13. Types of Cameras
14. Budgeting
15. Channel Analysis, Media Appreciation – Film review
16. Distribution of Films
17. Introduction to Editing Software – Adobe Premiere, After Effects, Sound Forge.

Suggested Readings:

1. Electronic Media: An Introduction, “Lynne S. Gross (Author)”, McGraw-Hill 2.
- India's communication revolution, “Arvind Singhal, Evertt M. Rogers”, Sage India

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAM - 5112

Career Management for Animation

Course Outcomes:

On completion of this course, the students will:

CO1: be able to identify opportunities locally as well as globally

CO2: learn formal/informal ways of communication

CO3: learn to make creative use of skills like digital resume/ motion graphics to advantage

CO4: learn to use various platforms available to increase visibility and opportunities

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAM - 5112****Career Management for Animation**

L-T-P	Max. Marks: 70
2-0-1	Theory: 40 Practical:20
Time: 3 Hours	CA: 15

Instruction to the paper setter: Eight questions of equal marks (specified in the syllabus) are to be set, two from each of the four sections. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question can be attempted from any of the sections.

UNIT- I**Career opportunities in Animation:**

Exploring different opportunities in Animation, A list of local, national, and international studios Existing studios and Industries which require animation

UNIT- II

Formal Communication: Etiquettes of Public speaking, Business meetings, Telephonic communication, Email etiquettes.

Informal Communication: Introduction, expressing gratitude, expressing regret, Apologize, Resolving conflicts.

Presentation Skills: Preparing presentation, making presentation meaningful and engaging, making effective use of the visual aid, interacting with audiences, dealing with queries from the audiences.

UNIT- III

Creative use of Animation: Prepare a Digital resume, prepare a Motion graphic resume

Preparing for Interviews: Key factors for being successful in an interview, body language, confidence, subject expertise

UNIT- IV

Awareness of various platform for enhancing skills and professional growth

Creating Account on websites like animation express, bloggers.com, freelance.com, upwork.com for project work

Lifecycle of the project to be developed as a freelancer

Creating and maintaining account on professional networks like LinkedIn for career growth opportunities

Practical Submission: Digital Reel Resume

Suggested Readings:

1. Chaturvedi PD, Chaturvedi Mukesh, "Business Communication: Skills, Concepts, and Applications", Pearson Education India
2. Robin Ryan, "60 Seconds and You're Hired! Revised Edition", Penguin Books
3. Joan van Emden, Lucinda Becker, "Presentation Skills for Students", Palgrave
4. David Barron, "Resume: The Definitive Guide on Writing a Professional Resume to Land You Your Dream Job", CreateSpace Independent Publishing Platform
5. Angela Rose (Author), "LinkedIn in 30 Minutes (2nd Edition): How to Create a Rock-Solid LinkedIn Profile and Build Connections That Matter", I30 Media Corporation; 2nd edition

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAM - 5113

Film Direction and Documentary

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: understand history, aesthetics, challenges, and opportunities in documentary making

CO2: inception of a project from story idea, screen crafting, analysis i.e., pre-production

CO3: execute the identified idea through production to post production CO4: handle

camera and staging while shooting the documentary

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAM - 5113****Film Direction and Documentary**

L-T-P	Max. Marks: 100
2-0-2	Theory: 60 Practical: 20
Time: 3 Hours	CA: 20

Instruction to the paper setter: Eight questions of equal marks (specified in the syllabus) are to be set, two from each of the four units. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question can be attempted from any of the sections.

Unit- I

Introduction, history, and future: The Director's Role, A brief And Function History of Documentary; Aesthetics and authorship: Authorship Challenges and Opportunities, Reconstruction, and docudrama, Documentary Theory, Project: Critical writing

Unit - II

Identity and authorship: Project: Recognizing your Creative Identity, Developing Your Story Idea; Screen craft: Screen Grammar, Project: screen craft Analysis, Projects; Basic Production

Unit- III

Production: Camera Equipment and Shooting Procedure, Lighting, Location Sound and Postproduction: Designing a Structure, Editing, Using Music and Working with a Composer, Fine Cut to Sound Mix

Unit-IV

Shots, 180-Degree Rule, 30-Degree Rule, Screen Direction, Film-Time, Compression; Organizing Actions in a Dramatic Scene; Staging: Patterns of Dramatic Movement, Changing the Stage within a Scene, Staging as Part of a Film's Design, Working with a Location Floor Plan; Camera: The Camera as Narrator, Objective Camera, Subjective Camera, Shot Lists, Storyboards and Setups

Suggested Readings:

1. Documentary Storytelling: Creative Nonfiction on Screen, "Sheila Curran Bernard", Focal Press
2. Making Documentary Films and Reality Videos: A Practical Guide to Planning, Filming, and Editing Documentaries of Real Events, "Barry Hampe", Holt Paperbacks
3. Video production, "VasukiBelavadi", Oxford University Press India;
4. Television production handbook, "Herbert Zettl", Cengage Learning

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAP - 5114

Acting for Animation

Course Outcomes:

On the successful completion of the course students will be:

CO1: able to comprehend essential Acting concepts in context of animation

CO2: able to understand the importance of observation, emotion and expressions to make any animation project life-like

CO3: aware of the body language, facial expressions and voice modulation while animating characters

CO4: able to apply how people behave, enact and react in animation

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAP - 5114****Acting for Animation**

L-T-P	Max. Marks: 75
0-0-3	Practical: 60
Time: 3 Hours	CA: 15

Note for practical examiner: Paper will be set on the spot by practical examiner.

Practical Submissions: -

Animation with dialogue & expressions (minimum 500 frames) Using Adobe Flash or Maya

Syllabus to be covered for practical:

UNIT - I

Essential of Acting Concepts: ACTING - Basic Performance skills, physical preparation
VOICE, SPEECH & MUSIC - Exercises that focus on breathing, humming, pitch, volume and singing

UNIT- II

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

Facial expressions & Lip synchronization: How to use Character's body, voice, and imagination.

UNIT- III

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

UNIT- IV

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

Suggested Readings:

1. Acting for Animators – Ed Hooks Publisher: Heinemann Drama; Revised edition 2. The artist's complete guide to facial expressions – Gary Gaigin Publisher: Watson-Guptill

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAP - 5115

3D Architecture Lighting and Rendering

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: Learning about light in Real world & CG work space

CO2: Working with lighting-intensity, illuminations color, lens effects for realistic outputs

CO3: creating different light setups for Interior and Exteriors

CO4: working with V-Ray in 3d Models

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAP - 5115****3D Architecture Lighting and Rendering**

L-T-P	Max. Marks: 75
0-0-3	Practical: 60
Time: 3 Hours	CA: 15

Practical: Exercises to be implemented

- 1. Creating basic lighting**
- 2. Creating 3-Point lighting**
- 3. Working with Arnold lights**
- 4. Working with V-Ray lights**

Unit I

Autodesk 3ds Max Design Lighting Overview, Choosing a Lighting Strategy. Fundamentals of Standard Lighting, Types of Standard Lights, Shadow Types, Photometric Light Objects, Exposure Control, Daylight Lighting, Soft Shadows and Ambient Occlusion.

Unit II

Lighting and Rendering using Arnold, Scene Preparation for Arnold, Fundamentals of Arnold, rendering with Arnold, Arnold Interior Rendering, Controlling Arnold Quality, physically based lighting, working with materials, Interactive rendering, Light path expression. **Unit III**

Rendering Engines, Iterative Rendering, Camera Parameters, Background Images, The Print Size Wizard, Selected Rendering Options, and Rendering Presets.

Unit IV

Using V-Ray for realistic Rendering of all CG assets. Using Colored lights to create dynamic fantasy renders. Using isometric rendering technique to create miniature architectural models.

Recommended Books / Suggested Readings:

1. Autodesk 3ds Max 2021: A Detailed Guide to Arnold Renderer, 3rd Edition by Pradeep Mamgain
2. Architectural Rendering with 3ds Max and V-Ray: Photorealistic Visualization by by Markus Kuhlo (Author), Enrico Eggert.

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAP - 5116

Match Moving Techniques

Course Outcomes:

On the successful completion of the course students will be able to:

CO1: Understanding Virtual camera for live action footage compositing.

CO2: Analysing Survey Data for compositing.

CO3: Understanding different ways of tracking and compositing a footage.

CO4: Exporting the data to be used for final output.

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAP - 5116****Match Moving Techniques**

L-T-P	Max. Marks: 100
0-0-4	Practical: 80
Time: 3 Hours	CA: 20

Practical: Exercises to be implemented

- 1. Understanding match moving process**
- 2. Shooting raw footage**
- 3. Tracking (2D & 3D)**
- 4. Composing footage**

Unit I

Understanding Motion Control Rig, Understanding Matchamation and Matchmoving, Footage Preprocessing: Understanding Stabilization, Understanding, Distortion, Understanding Shutter fix

Unit II

Tracking, Using Geometry, 2d Tracking, 3d Tracking, OBJ and FBX to track an objector camera, non-conventional tracking, tracking non rigid objects and deformations, Camera and object Solution:

Unit III

Scene setup, Scene scale, Scene orientation, Exporting Solution: Exporting data for 3d Packages, Exporting data for Compositing Packages.

Unit IV

Importing and Exporting data into compositing software, Compositing live action and CG.

Suggested Readings:

1. Dobbert, Tim, The Invisible Art of Camera Tracking, John Wiley & Sons; 2nd Edition
2. The Art and Technique of Match moving: Solutions for the VFX Artist (2017) by Erica Hornung

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAP - 5117

3D Modeling for Gaming

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: Create real-time detailed 3d gaming models

CO2: Develop customized architectural drawings or construction documents.

CO3: Create scenes for gaming.

CO4: Understand the gaming environment.

Bachelor of Vocation (Animation) Semester-V**Course Code: BVAP - 5117****3D Modeling for Gaming**

L-T-P	Max. Marks: 100
0-0-4	Practical: 80
Time: 3 Hours	CA: 20

Practical Exercises to be implemented:

1. Creating modeling reference
2. Creating 3d models for game
3. Create 3d model and asset for game
4. Create gaming environment

Unit I

Introduction to Modeling, creating a surface using reference planes, dividing a surface, using model lines to create a basic structure, Testing the structure, Developing the structural pattern family.

Unit II

Creating site elements, generating conceptual architecture, 2D & 3D Sites, RPC, Vegetation, and Background. Analyzing digital design, Patterns, Extraction, Displacing, Merging and editing the displaced mesh, Creating Spline surface.

Unit III

Creating gaming scenes, Use of low poly modeling techniques to create gaming environment, placement of objects in the scene,

Unit IV

Low poly models vs High poly models, Import export the 3d objects in the scene, working with less detailed 3d models.

Suggested Readings:

1. Mooney, Thomas, (31 October 2012), 3DS Max Speed Modeling for 3D Artists, Packet Publishing Limited.
2. 3ds Max for Engineers & Architects by C.S. Changeriya
3. Modeling the Environment - Techniques and Tools for the 3D Illustration of Dynamic Landscape (English, Paperback, Cantrell B)

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAP - 5118

Digital Sculpting

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: Understanding the process of sculpting of a character

CO2: Learning about workflow of 3D primitives.

CO3: Learning 3d brushes and detailed observation of anatomy of character

CO4: Working with the Dynamesh and Zmodeler.

Bachelor of Vocation (Animation) Semester-V

Course Code: BVAP - 5118

Digital Sculpting

L-T-P	Max. Marks: 100
0-0-4	Practical: 80
Time: 3 Hours	CA: 20

Practical Exercises to be implemented:

1. working with basic sculpting
2. creating basic 3d sculpt model
3. creating dynamesh
4. creating model from zphere

Unit II

Introduction to zbrush: Introduction to user Interface, Customizing ZBrush interface, Understanding Edit mode, Different 3D primitives, Edge Control.

Unit II

3D brush basics: Brush adjustments, Strokes, alpha, Masking

Unit III

Working with shadow box: Entering Shadow Box Mode, Modify, Resolution, Using references in working plane

Unit IV

Introduction to dynamesh, usage of zmodeler: Inserting additive and negative meshes, Intersecting Meshes, Adding shell. Actions and Targets, Edge Selector Widget, Working with Polygroups, Replay the Action, Masking, Actions, Targets

Recommended Books / Suggested Readings:

1. Spencer, Scott, (4 February 2011), ZBrush Character Creation: Advanced Digital Sculpting, Sybex; 2nd Edition edition.

Bachelor of Vocation (Animation) Semester-VI

Course Code: BVAL - 6111

Publicity Designing and Media laws

Course Outcomes:

On successful completion of this course the student will be able to: CO1: understand digital media form, media laws concerning digital art. CO2: understand plagiarism, laws to enforce digital art protection in India CO3: understand ethical issue concerning media in general CO4: develop awareness of being ethical in digital space.

Bachelor of Vocation (Animation) Semester-VI**Course Code: BVAL - 6111****Publicity Designing and Media laws**

L-T-P	Max. Marks: 100
4-0-0	Theory: 80
Time: 3 Hours	CA: 20

Instruction to the paper setter: Eight questions of equal marks (specified in the syllabus) are to be set, two from each of the four sections. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question can be attempted from any of the sections.

UNIT- I

Different media used for publicity:

Digital media: Internet Websites, social media, online advertisements etc.

Print media: Newspapers, Magazines, Hoardings, posters etc.

UNIT- II

Media laws: Media and its uses in legal context, Copyright act: Current Laws for copyright, legal consequences of breaching copyright, Contempt of court – Civil and Criminal contempt, Plagiarism, Defamation.

Copy rights in India: Legal definition, Types of copyrights, Infringement, and consequences Cyber Law: IT Act of 2000; Amendment of IT Act in 2008; Measures against digital piracy; social media and OTT self-regulation

UNIT- III

Ethical Issues in Indian Media, Media Bias, Censorship, Privacy issues, Violence, Hate speech, Fake news and post-truth, Trial by media, Women and Children in media, Pressures on Media Freedom (Political, Commercial, Legal)

Role of press and/or media councils, Press Council of India and its broad guidelines for the press, codes for radio, television, advertising, and public relations.

UNIT- IV

Introduction to media ethics in the digital world, Dignity, Transparency, Privacy, Freedom of Expression, Cancel Culture and Freedom of Speech, Power of Social media platforms like Facebook and Twitter, Using Data and images.

Suggested Readings:

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.
3. Development of Media and Media Law – Mittika Singal Bhushan, Aadi Publications, 2014
4. Media Law and Ethics – M. Neelamalar, Prentice Hall India Learning Private Limited, 2009

Bachelor of Vocation (Animation) Semester-VI

Course Code: BVAL - 6112

CG and VFX Technologies

Course Outcomes:

On completion of this course, the students will:

CO1: Understanding the role of CG and VFX in Industry.

CO2: Familiarize with the industry lingo.

CO3: Learn about various elements required to create a realistic CG or VFX shot.

CO4: understand various modern CG and VFX techniques used throughout the industry.

Bachelor of Vocation (Animation) Semester-VI**Course Code: BVAL - 6112****CG and VFX Technologies**

L-T-P	Max. Marks: 100
4-0-0	Theory: 80
Time: 3 Hours	CA: 20

Instruction to the paper setter: Eight questions of equal marks (specified in the syllabus) are to be set, two from each of the four sections. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question can be attempted from any of the sections.

UNIT- I

CG: Understanding the term CG. Origin of CG and early films that used CG elements. Understanding the elements involved in the making of older 3D film integration techniques (Jurassic Park, Indiana jones, Star Wars). CG in Videogames.

UNIT- II

CG Production: Understand the production pipeline of CG elements. How characters are created from concept to the final look used in the film. Creating assets like props or virtual sets to create a believable environment. Understanding the use of CG in animated films vs live action films. Motion Capture animation, game animation loops, importance of creating loops in video-games

UNIT- III

VFX: Understanding the term VFX. Origin of VFX – Charlie Chaplin, Edwin S. Porter, George Melies. Understanding the elements involved in the making of older 3D film integration techniques (Jurassic Park, Indiana jones, Star Wars).

UNIT- IV

VFX Production: When to use the green screen and blue screen. Light filters, cinematic look, special effects make up. Motion capture, chroma screens, savage. Making of mirror scenes, shooting action shots and car chase scenes in films like fast and furious & speed. Set building and art direction, costume design, make up art. Various camera gimbals and robots that help in maintaining and creating the same shot over and over again. Techniques used in hyper lapse & infinity zoom through video Editing.

Suggested Readings:

1. Computer Graphics from Scratch: A Programmer's Introduction to 3D by Gabriel Gambetta
2. Masters of FX: Behind the Scenes with Geniuses of Visual and Special Effects a Book by Ian Failes

Bachelor of Vocation (Animation) Semester-VI

Course Code: BVAP - 6113

Personality Enhancement

Course Outcomes:

On successful completion of this course the student will:

CO1: learn to communicate in a professional environment

CO2: be well groomed with Social & behavioral etiquettes

CO3: be aware of body language and its implications in professional environment

CO4: be able to appear in interviews confidently

Bachelor of Vocation (Animation) Semester-VI**Course Code: BVAP - 6113****Personality Enhancement**

L-T-P	Max. Marks: 100
4-0-0	Theory: 80
Time: 3 Hours	CA: 20

Instruction to the paper setter: Evaluation will be done by the external examiner. The examination will be conducted by internal examiner/examiners depending upon options offered. The students shall be required to maintain a file containing various documents related to the subject which will be verified by the external examiner.

Corporate Etiquette

- Making a Great First Impression
- Greetings, Introductions, The Art of Small Talk and Conversations
- Polishing Business Manners: Handshake, gifts, visiting cards, humour, office behaviour etc.
- Mastering Cross Cultural Etiquette to deal with Diversity
- Dining Etiquette
- Understanding the Art of Entertaining: Playing a Gracious Host
- Interview Skills
- Social Behaviour & Etiquette

Personality Development

- Self-Esteem & Confidence Building
- Power Dressing: Wardrobe Etiquette
- Grooming for Success
- Body Language, Poise, and Eye Contact
- Pronunciation, Voice Modulation, and Diction
- Assertive Behaviour
- Leadership Qualities
- Handling difficult situations with grace, style, and professionalism

Note: The course would involve interactive sessions, individual and group exercises, role plays, situation-handling, and experience-sharing. Selected video films will complement these.

Bachelor of Vocation (Animation) Semester-VI

Course Code: BVAP - 6114

Industrial Training and Report Writing

Course Outcomes:

On successful completion of this course the student will be able to:

CO1: get exposure on how to work in a professional environment

CO2: will get hands on experience for working through pre-production, production,
and

post-production

CO3: understand the division of work and workflow followed to meet deadlines

CO4: apply tools learned during the course

Bachelor of Vocation (Animation) Semester-VI**Course Code: BVAP - 6114****Industrial Training and Report Writing**

L-T-P	Max. Marks: 250
0-0-18	
Time: 3 Hours	

Following points should be taken care of while working during industrial training:

1. The students have to attend industrial training for the duration of minimum of 3 months in any of the following fields: -
 - a) Designing
 - b) Video Editing
 - c) VFX
 - d) 2D Animation
 - e) 3D Animation
2. The duration of the training work submission should be minimum 1500 frames.
3. The evaluation criteria primarily focus on:
 - a) Effective use of camera and various software tools
 - b) The assignment (i.e. animated movie/sequence) undertaken must convey the message successfully for which it is undertaken.
 - c) Training Report
 - d) Viva Voce
4. The training report must include:
 - a) Title and abstract overview of the work done during training.
 - b) Brief introduction to the company and specific area of work being carried out.
 - c) Requirements:
Hardware and environment needed
Various Software/Tools used
 - d) Plan: The subject matter/script/scenes as required.
 - e) Implementation: Script Writing, Design, Recording, Audio/Video Editing etc.
5. The project submission includes the following: -
 - a) Training Certificate
 - b) Training Report
 - c) Work files and Final Render