

**FACULTY OF VOCATIONAL STUDIES**

**SYLLABUS FOR**

**Master of Vocation (Animation and VFX)  
(Semester I-IV)**

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

**Session: 2025-26**



**The Heritage Institution**

**KANYA MAHA VIDYALAYA  
JALANDHAR  
(Autonomous)**

## **MASTER OF VOCATION (M.VOC.) PROGRAMME**

**PROGRAMME OUTCOMES:** Students opting for Master of Vocation Programmes on course completion/exit points will be able to:

PO1: get better job opportunities and can make informed choices due to enhanced employability and 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: 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.

PO4: 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 Master 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. Will be able 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 and of graphic design in 2d animation and in various aspects of 3D animation namely 3d modelling, texturing & Lighting, rigging & animation during the production phase.

PSO4. Will be able to implement the use of audio editing, video editing, and VFX in final Post –production.

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

**Scheme and Curriculum of Examination of Two-year Degree Programme  
Master of Vocation (Animation and VFX)  
Semester I  
Session 2025-26**

Course code	Course Title	Course Type	Credits		Marks				Examination Time in Hours	
			L	T	P	Practical	Ext.			CA
							L	P		
MVAL 1111	Fundamentals of Design and Animation	C	2-0-0	2	50	35	-	15	3(Theory)	
MVAM 1112	Foundation Course on Animation	C	2-0-1	3	100	40	30	30	3(Theory) 3(Practical)	
MVAM 1113	Basics of Photography	C	2-0-1	3	100	40	30	30	3(Theory) 3(Practical)	
MVAP 1114	Introduction to 2D Animation	S	0-0-4	4	100	-	70	30	3(Practical)	
MVAP 1115	3D Modeling in Maya – Advanced	S	0-0-4	4	100	-	70	30	3(Practical)	
MVAP 1116	Graphic Designing – Advanced	S	0-0-4	4	100	-	70	30	3(Practical)	
MVAI 1117	Assignment and Viva (Application of Software Tools and Techniques)	S	0-0-4	4	100	-	70	30	3(Practical)	
	<b>Total</b>			24						

Note: C – Compulsory  
S – Skill Enhancement

**Scheme and Curriculum of Examination of Two-year Degree Programme  
Master of Vocation (Animation and VFX)  
Semester II  
Session 2025-26**

Course code	Course Title	Course Type	Credits		Marks				Examination Time in Hours
			L-T-P	Total	Total	Ext.		CA	
						L	P		
MVAM 2111	Workplace Health and Safety	C	1-0-1	2	50	25	15	10	3+3
MVAP 2112	Video Editing	C	0-0-3	3	75	-	60	15	3
MVAP 2113	Digital Compositing	C	0-0-3	3	75	-	60	15	3
MVAP 2114	Storyboarding, Animatics and Screenplay	S	0-0-4	4	100	-	80	20	3
MVAP 2115	2D Digital Animation – Advanced	S	0-0-4	4	100	-	80	20	3
MVAP 2116	3D Animation	S	0-0-4	4	100	-	80	20	3
MVAI 2117	Assignment and Viva (Application of Software Tools and Techniques)	S	0-0-4	4	100	-	80	20	3
	<b>Total</b>			24					

**QPs at Exit level 1: - Animator (MES/Q 0701)/ Modeller (MES/Q2501)**

Note: C – Compulsory  
S – Skill Enhancement

**Scheme and Curriculum of Examination of Two-year Degree Programme  
Master of Vocation (Animation and VFX) Semester III  
Session 2025-26**

Course code	Course Title	Course Type	Credits		Marks				Examination Time in Hours
				L-T-P Total Total	Ext.		C A		
					L	P			
MVA M 3111	Experimenting and Research in Animation	C	3-0-1		100	40	30	30	3+3
MVA M 3112	Lighting, Texturing and Rendering	C	3-0-1		100	40	30	30	3+3
MVAP 3113	Advance Digital Sculpting	C	0-0-4		100	-	70	30	3
MVAP 3114	Advanced Motion Graphics	S	0-0-4		100	-	70	30	3
MVAP 3115	UI/UX Designing	S	0-0-4		100	-	70	30	3
MVAP 3116	Visual Effects (VFX)	S	0-0-4		100	-	70	30	3
MVAD 3117	Minor Project	S	0-0-6		100	-	70	30	3
	<b>Total</b>			30					

Note: C – Compulsory  
S – Skill Enhancement

**Scheme and Curriculum of Examination of Two-year Degree Programme  
Master of Vocation (Animation and VFX) Semester IV  
Session 2025-26**

Course code	Course Title	Course Type	Credits		Marks				Examination Time in Hours
			L-T-P		Total	Ext.		CA	
						L	P		
MVAM 4111	Career Management		4-0-2	6	100	40	30	30	3+3
MVAM 4112	Digital Art Copyrights	C	4-0-2	6	100	40	30	30	3+3
MVAI 4113	Industrial Training and Report Writing	S	0-0-18	18	250	-	250	-	3
				30					

**QPs at Exit level 2: - VFX Editor (MES/Q3501)/ Composer (MES/Q3505)**

Note: C – Compulsory  
S – Skill Enhancement

**Master of Vocation (Animation and VFX) Semester-I**  
**Course Code: MVAL-1111**  
**Fundamentals of Design and Animation**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: Develop the fundamental understanding of CGI

CO2: Understand and apply various elements of design

CO3: Get an overview of animation techniques beginning from early Disney animation processes

CO4: Understand and implement the principles of animation in their artwork/animation.

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAL-1111**

**Fundamentals of Design and Animation**

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

**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**

Computer Graphics & its applications, Types of Graphics, Different Formats of Video & Images Its Use, Aspect ratio, Resolution (PPI, DPI), Pixel, Color Wheel

**Unit - II**

Visual Perception and Design - How do we SEE? [Seeing and observing]

Visual elements - Line and shape, Form, value, texture, color

Principles of Design.

Color and composition

**Unit - III**

History of Animation

Introduction to Animation movie process.

Different Types of Animation:

Traditional Animation - Cell Animation or hand drawn Animation

Stop Motion Animation – Puppet Animation, Clay Animation, Cut-out Animation, Silhouette Animation, Object Animation etc.

Computer Animation – 2D Animation, 3D Animation

Brief introduction to Open-Source Tools for Designing and Animation

**Unit - IV**

12 principles of animation (The basic rules of animation including Squash and stretch, Anticipation, Staging, Straight Ahead Action and Pose to Pose, Follow Through and Overlapping Action, Slow in and Slow Out, Arc, Secondary Action, Timing, Exaggeration, Solid drawing, Appeal.)

**Suggested Readings:**

Colin Ware, “Visual Thinking: for Design”, Morgan Kaufmann

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

Stephen Cavalier, “The World History of Animation”, Univ of California Pr

**Master of Vocation (Animation and VFX) Semester-I**  
**Course Code: MVAM-1112**  
**Foundation Course on Animation**

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 character, or a composition.

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAM-1112**

**Foundation Course on Animation**

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

**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 with the tools for drawing**

Drawing pencils: - (HB, B, 2B,4B, 6B,8B, 10B, 12B), Charcoal Pencil, Clutch Pencil.

Sheets: - cartridge, Hand Made, Ivory, Art Card, duplex, News Print, Mount board sheet etc.

Colors: - Poster color, Water Color, Pastel color, Pencil Color, waterproof ink.

**Unit II**

**Object Drawing, Light & Shade:**

Introduction to object drawing.

Introduction of light and shadow on objects and an assessment and representation of the impact of light on simple forms and objects. (Still Life Study)

**Unit III**

**Perspective Drawing:**

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

**Nature Study:**

Drawing from Nature, Location drawing and learning to represent trees, plants, bushes, shrubs, insects, birds, and animals with attention to, proportion.

**Unit IV**

**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.

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

**Suggested Readings:**

Bancroft Tom, "Creating Character with Personality", Watson-Guption

Victor Perard, "Anatomy and Drawing", Dover Publications

Hart Christopher, "Modern Cartooning: Essential Techniques for Drawing Today's Popular Cartoons", Watson-Guption

**Master of Vocation (Animation and VFX) Semester-I**  
**Course Code: MVAM-1113**  
**Basics of Photography**

**Course Outcomes:**

CO1: After passing this course the student will be able to:

CO2: understand and differentiate different types of digital photography

CO3: utilize various camera settings to the best as per requirement of the shot

CO4: understand various angles and shot depending on their relevance

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAM-1113**

**Basics of Photography**

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

**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

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

**Unit - II**

Camera Lens and its Types,

Element of Exposure (Aperture, Shutter Speed, Depth of Field, ISO)

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

Symmetry Photography golden hours

**Unit - III**

Image editing: Image editing through image editing software like Adobe Photoshop – Adjustment of Brightness, Contrast, Tonal and Colour Values – Experimenting with Level and Curve.

Digital Retouching & Image Enhancement

Image size, Resolution, Selection tools. Retouching tools, Layers & Incorporation of text into picture.

**Unit - IV**

Photo Manipulation: Applying Different effects and filters

Three Point Lighting

**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:**

How to Create Stunning Digital Photography, “How to Create Stunning Digital Photography”, Mason Press

Al Judge, “Mastering Aperture, Shutter Speed, ISO and Exposure”, Subtle Visions Media

Bryan Peterson, “Understanding Exposure”, Amphoto Books

**Master of Vocation (Animation and VFX) Semester-I**  
**Course Code: MVAP-1114**  
**Introduction to 2D Animation**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: understand the interface, basic tools, navigation and drawing basic shapes in Adobe Flash

CO2: work on a 2D platform using basic techniques.

CO3: understand the production pipeline of 2d better by hands-on and practice CO4: apply different animation techniques/ animation principles learned so far in the course.

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAP-1114**

**Introduction to 2D Animation**

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

Practical Exercises to be implemented:

1. Background Design
2. 2d Character Design
3. A Simple Scene of a Sunrise (with background and the environment)
4. A moving car scene on a road (with background)
5. A text animation using Mask
6. Animating a butterfly moving along a guide.
7. Bouncing Ball in place
8. Bouncing ball across the scene
9. Flag Animation
10. Pendulum Animation

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

Introduction to Adobe Animate, Basics of Animation, Workspace overview, Using the Stage and Tools Panel, understanding timeline tools and their usage, Property panel- Library panel, colour panel, Understanding layers, Methods of Animation.

Technical Animation creation: Drawing in Animate- choosing colours, choosing line style, designing and alignment of elements, drawing panels - Time-line animation, Frame-by - frame Animation, Tweening, using symbols, adding sounds. Working with projects - Importing artwork.

**Suggested Readings:**

Adobe Creative Team, "Adobe Flash Professional CS6 Classroom in a Book", Adobe  
Georgenes Chris, "How to Cheat in Adobe Flash CC: The Art of Design and Animation",  
Focal Press

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAP-1115**

**3D Modeling in Maya- Advanced**

**Course Outcomes:**

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

CO1: apply various 3D modelling techniques for Surface modelling and Nurbs modelling,

CO2: apply various 3D modelling techniques for polygon modeling

CO3: create a 3D model of an interior or exterior

CO4: model a 3D character with blend shapes

## Master of Vocation (Animation and VFX) Semester-I

Course Code: MVAP-1115

### 3D Modeling in Maya- Advanced

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

#### **Practical exercises to be implemented:**

1. A 3d character model with blend shapes
2. Any two-inorganic models
3. Interior or Exterior model

#### **Syllabus to be covered for the practical:**

##### **Unit – I**

#### **Surface Modeling:**

NURBS Primitives, Using Curves, CV Curve tool, EP Curve Tool, Bezier Curve Tool, Arc Tools, Attaching and Detaching Curves, Open/Close Curves, Insert Knot, Extending Curves, Rebuild Curves, Surface objects, Revolve, Loft, Planar, Extrude, Bi rail, Boundary, Bevel and Bevel Plus, Attaching and Detaching Surfaces, Sculpt Geometry Tool,

NURBS Modeling - NURBS Product Model.

##### **Unit - II**

#### **Polygon Modeling:**

Polygon Primitives, Combine, Separate and Extracting functions, Extrude, Bridge, Append Polygon Tool, Inserting Edge loops, merging vertices, Bevel function, Crease tool, Split Polygon Tool, Create Polygon tool.

##### **Unit - III**

Creating and understanding topology of inorganic models like Chair, Table, Shelf, PC etc., Creating Complex Objects like Gun, Vehicle etc. Resolving mesh, Manipulating triangular polygon to quad polygon. Smoothing Polygon surface, Combining and Merging Separate Geometries, Grouping and Ungrouping objects

##### **Unit - IV**

#### **Cartoon Character Modeling:**

Using Image Planes, setting up Images, Maya Display layers, Freezing Reference Images, Modeling Blocking Mesh using Maya Primitives, working with topology, Modeling Torso, Legs, Arm, Hand, Face, Creating Clothing and Props mesh, Using Sculpt Geometry tool, Mirroring Geometry, Creating Blend Shapes.

#### **Suggested Readings:**

Kelly Murdoch, "Autodesk Maya 2018 Basics Guide", SDC Publications Prof Sham

Tickoo, "Autodesk Maya 2018: A Comprehensive Guide", Cadcim Technologies

Chris Legaspi, "Anatomy for 3D Artists: The Essential Guide for CG Professionals", 3dtotal Publishing

Kelly Murdoch, "Autodesk Maya 2018 Basics Guide", SDC Publications

**Master of Vocation (Animation and VFX) Semester-I**  
**Course Code: MVAP-1116**  
**Graphic Designing- Advanced**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: Apply their understanding of design elements and its principles on practical exercises

CO2: Apply various types of image manipulation techniques

CO3: Work on real-time projects like designing of banners, brochures, matte paintings, movie posters applying fundamentals of graphic designing

CO4: will be able to design posts for advertisements and social media

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAP-1116**

**Graphic Designing- Advanced**

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

**Practical exercises to be implemented: Photoshop**

Calendar for an Animation Studio/Office.

Magazine/ Newspaper Advertisement ad full page and half page and quarter page  
Poster Design: Poster for an Animation Movie/ Web Banners

Image Manipulation

Photo Retouching

**Practical exercises to be implemented: Illustrator**

Create Objects (Mouse / Fruits/ Glass / bowl etc.)

Logo design (e.g.: McDonalds/ Master Card/ Nike etc.)

Print Design: Visiting Card, Letter Head

Trace and Stylize a City Landscape

Syllabus to be covered for the practical:

**Unit I**

What is Graphic Designing? What is the role of Graphic Designing?

**Principles of Design:** Understanding the most essential aspect of design, Unity, to achieve through different principles like, Balance, alignment, Emphasis, Proportion. Movement, Repetition, Contrast.

Introduction to Photoshop & its Tools

Bitmap and Vector Images and the difference between them, Image Resolution and Size,

Understanding different type of Modes like RGB, CMYK etc.

Understanding Adobe Photoshop Interface, Creating, Saving and Opening documents, Using Workspace and Toolbars, Utilizing Grids and Guides, Using basic navigation tools. Adding Annotations and Setting up preferences.

Basic Image Manipulation: Introduction to Camera raw. Basic Image Editing, Using Marquee and selection Tools, Shapes, Using Pen tool, Using Image editing options like Hue Saturation, Levels, Curves, etc. Tools shortcuts, Brush Tool, Using Color Picker, Background Eraser Tool, and using Creating and saving Brush preset and Pattern. Understanding layers and its properties.

**Unit II**

Effects and Tools: Using filters, Liquefy, vanishing point, Clipping Mask, Clone tool, Spot healing tool, Patch tool, using Crop and gradient tool, content aware tool, refine edges. Layer Styles, Blending modes,

Tools & Palettes: Text Basics, Understanding Type parameters, Editing text, type selection, character palette and paragraph palette, Type on a path. Text Wrap and adding effects to text, Using transformation properties.

### **Unit III**

**Vector Graphics Designing:** Introduction to Illustrator, Introduction to User Interface, understanding tools, Working with Image, and Shapes Manipulation, Selecting and Aligning, grouping, exploring object arrangement, working with nested group, Creating and Editing Shapes, Understanding Drawing modes, Joining Paths, Combining and Editing shapes, Using Image Trace to create Shapes, transforming objects, Working with Color and Pencil Tools

### **Unit IV**

Introduction to Curved Paths, Pen tool, Combining Curves with straight lines, drawing with the Pencil tools, Understanding Color, Adjusting Color, Painting with Patterns, Working with Live Paint, Understanding the Perspective Grid, Preset Grid, Active Grid, Understanding Symbols, Illustrator Symbols Library, Creating and Editing Symbols. Understanding Digital painting, Tools and techniques of digital painting, concept of Matte painting, Tools and techniques of matte painting, Understanding various filters and effects.

### **Common applications of Graphic design**

Identity (logos and branding), Publications (magazines, newspapers and books), Print advertisements, posters, Website graphics and elements, signs and product packaging,

### **Suggested Readings:**

Alex W. White, “The Elements of Graphic Design”, Allworth Press

Adrian Shaughnessy, “How to Be a Graphic Designer without Losing Your Soul”, Princeton Architectural Press

David Sherwin, “Creative Workshop: 80 Challenges to Sharpen Your Design Skills”, HOW Books

Ellen Lupton, “Thinking with Type”, Princeton Architectural Press Danae Lisa, “Adobe Photoshop CC Bible”, Wiley

Faulkner Andrew, “Adobe Photoshop CC Classroom in a Book”, Pearson Education

Adobe Creative Team, Adobe Illustrator CC Classroom in a Book

Brian wood ,Adobe Illustrator CC Classroom in a Book, Pearson Education

<https://www.youtube.com/watch?v=ZK86XQ1iFVs>

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAD-1117**

**Assignment and Viva (Application of Software Tools and Techniques)**

**Course Outcomes:**

The students through their project will be able to:

CO1: Apply the various tools and techniques learned in the course.

CO2: Understand the life cycle of the project and the various stages that leads to the outcome.

CO3: Will learn to interact and communicate and work in a team.

CO4: will be able to work on time-bound work.

**Master of Vocation (Animation and VFX) Semester-I**

**Course Code: MVAD-1117**

**Assignment and Viva (Application of Software Tools and Techniques)**

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

1. The students will work on a Graphic Designing/ a basic Animation project in their own identified area of interest.
2. The students project will be evaluated on the following Criteria:
  - a) Technical Quality
  - b) Creative Quality
  - c) Appeal to the Target Audience
  - d) Success in conveying message right.
3. The marks will be given on the basis of the submission of the project and viva-voce.

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAM-2111**

**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

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAM-2111**

**Workplace Health and Safety**

<b>L - T - P</b>	<b>Max. Marks: 50</b>
<b>1 - 0 - 1</b>	<b>Theory: 25 Practical: 15</b>
<b>Time: 3 Hours</b>	<b>CA: 10</b>

**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 **Practical Exercises:**

1. Identification of the different types of Fire extinguishers
2. A demonstration on using Fire extinguisher in case of any emergency.

**Suggested Readings:**

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

Gupta A.K, "Industrial Safety and Environment Paperback", Laxmi Publications; Second edition

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAP-2112**

**Video Editing**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: Know about editing basics, tools and video production process

CO2: Get Knowledge of working with footages in an editing software.

CO3: Learn different types of editing techniques

CO4: Edit a short film or music videos.

## Master of Vocation (Animation and VFX) Semester-II

Course Code: MVAP-2112

### Video Editing

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

#### Exercises to be implemented (Practical)

1. Slideshow of images
2. Synchronize text with audio
3. Create news ticker (lower third)
4. Mash up
5. Create a video includes shots from different angles
6. Create a one-minute short film

#### Syllabus to be covered:

##### Unit - I

**Introduction to Editing:** Introduction to video Editing. Develop an understanding of the digital video production process: pre-production, shooting, editing, and post-production. Understanding importance of editing in the flow of a narrative. Pace and Rhythm in editing. Linear and Non-Linear Film Editing.

**Introduction to Editing Tool:** Premiere Pro Working with interface. Importing supported files and saving project. Understanding tools and palettes, timeline and project panel. Previewing footages. Managing footages. Use of timeline, source monitor, project monitor, project panel, sequence, Different types of tools effects & transitions in Premiere Pro.

##### Unit - II

#### Working with footages

Setting up project, removing frames, naming, finding and deleting footages, learning file size limitations, using markers, In-out points, scaling clips, creating black video, adding transitions. Changing and replacing transitions. Adding Key, Time remapping, video formats and resolutions.

Editing mode, Timeline, changing Frame size, Aspect Ratio, Fields, Audio sample rate, File format, Codec, Export, Multi cam Editing, Color Correction and Grading

**Unit - III**  
**Understanding uses of different types CUTs** (Matched action, after action, before action, foreground wipe, look off, Dialogue referent, reaction, thought referent, visual linkage,

Dialogue overlap, Audio linkage, loud sound)

##### Unit - IV

**Different types of video editing techniques** (Crane shot, establishing shot, Frantic zoom, Steadicam long take, Mirror shot, zoom-out, point of view, Crane shot spin, Time lapse, Pan,

Slow motion, Low angle shot, special effect (VFX), 180-degree rule

#### Suggested Readings:

1. [Adobe](#) "Adobe Premiere Pro CC Classroom in a Book", Pearson Education India

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAP-2113**

**Digital Compositing**

**Course Outcomes:**

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

**CO1:** Create Live action shots with Computer Composition.

**CO2:** Create Rotoscopy and Keying.

**CO3:** Understand Tracking and compositing shots

**CO4:** Create final output in various formats for different channels.

## Master of Vocation (Animation and VFX) Semester-II

Course Code: MVAP-2113

### Digital Compositing

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

Practical Exercises to be implemented

1. Creating multiple layers for compositing
2. Working with chroma footage
3. Masking footage
4. Rotoscopy
5. Compositing in fusion
6. Tracking footage

#### Unit I

Adobe After Effects, User Interface, Understanding Project, Footage, Composition, Timeline, Basic Animation, Easy Ease and Motion Paths, Motion Sketch and Smoothing. Layers & Composition, Layers, Blending Modes and Adjustment Layers, Pre Composing, Frame Rate, Time Stretch and Time Remapping, Masking, Parenting.

#### Unit II

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, Compression.

#### Unit III

Introduction to fusion, node based compositing, Understanding User Interface, Understanding Nodes, Load and Save Files, Basic Animation. Understanding Footage, Understanding Foreground and Background, Understanding Nodes, Basic Composition, Understanding Mask, Understanding Alpha Channel, Color correction, Sky replacement.

Tracking and keying, Understanding different types of tracking techniques, Understanding Warp and Transform, Understanding Matte (Chroma Keyer, Difference Keyer, LumaKeyer, Matte Control, Ultra keyer.

#### Unit IV.

Multi-pass compositing, Understanding Render passes, Importing Render passes, Understanding Camera, Understanding channels

#### Suggested Readings:

1. Adobe Creative cloud After Effects CC by Adobe.
2. The eyeon Fusion 6.3L A Tutorial Approach by Prof. Sham Tickoo Purdue Univ, CADCIM Technologies.
3. Brinkmann, Ron, (24 May 2008), The Art and Science of Digital compositing, Second Edition: Techniques for Visual Effects, Animation and motion Graphics( The Morgan kaufmann Series in Computer Graphics), Morgan Kaufmann Publishers In; 2nd Revised edition edition.

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAP-2114**

**Storyboarding, Animatics and Screenplay**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: know about importance of different styles of storyboard

CO2: Know about Story, script and storyboard and its importance in film.

CO3: Get knowledge of all elements of a film

CO4: Write a screenplay.

## Master of Vocation (Animation and VFX) Semester-II

Course Code: MVAP-2114

### Storyboarding, Animatics and Screenplay

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

#### 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 Storyboarding

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

#### Unit - II

Introduction to various shots, Camera angles and used in Storyboard panels. Continuity and Timing, Building a sequence of shots. Use of Perspective, Light & Shadow in Storyboarding.

#### Unit - III

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

#### Unit - IV

Screenplay: Introduction, Script, Three Act Structure, Act One, Act Two, Act Three, Writing Synopsis (Treatment), Dialogue. Basic guidelines for writing a screenplay

#### Practical Exercises to be implemented:

- Story creation
- Convert story to screenplay using three act structure
- Story-board creation or animatic creation

#### Suggested Readings:

Hart John "The Art of StoryBoard", Focal Press.

Simon A [Mark](#) "Storyboards: Motion in Art", Focal Press.

Field Syd "Screenplay: The Foundations of Screenwriting", RHUS; Revised ed. edition [Vinod Chopra Films](#) "3 Idiots: The Original Screenplay", Om Books

**Master of Vocation (Animation and VFX) Semester-II**  
**Course Code: MVAP-2115**  
**2D Digital Animation - Advanced**

**Course Outcomes:**

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

CO1: understand the usage of timeline, setting frame rate, keyframing the concepts fundamental to 2D Animation process

CO2: design a character ready to animate

CO3: animate the character with life like expression and emotions

CO4: implement walk-cycle /lip syncing of dialogue

## Master of Vocation (Animation and VFX) Semester-II

Course Code: MVAP-2115

### 2D Digital Animation - Advanced

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

#### Practical exercises to be implemented:

1. Demonstrate various expressions on a character/Cartoon
2. Create a Cartoon character using symbols as building blocks
3. Create a Character(realistic/cartoon) with personality
4. Create and Animate armatures
5. Animate a walk cycle
6. Create character using symbols
7. Lip syncing a dialogue

#### Syllabus to be covered for the practical:

##### UNIT-I

Introduction to Adobe Animate CC, Basics of Animation, Workspace overview, tools and their usage, color panel, understanding layers, Methods of Animation, Understanding the Timeline panel, Organizing layers in a timeline, Using the Properties panel, Using the Tools panel, Adding layer effects, Undoing steps in Animate, Previewing and exporting your movie, Modifying the content and Stage, Saving your movie.

##### UNIT – II

Technical Animation creation: Drawing in Animate CC - choosing colors, choosing line style, designing and alignment of elements, Frame-by -frame Animation, Tweening & using symbols, Working with projects - Importing artwork into Animate CC, Graphic symbols for lip-syncing dialogue

##### UNIT – III

Using the camera, animating shapes, Using classic tweens Creating a shape tween, Creating a looping animation, Previewing animations with onion skinning, Creating and using masks, Animating the mask and masked layers, Easing a shape tween. **UNIT**

##### – IV

Using sounds, Understanding video , Using Adobe Media Encoder CC, Understanding encoding options , Playing back of external video in your project , Exporting Final Animation with Audio/Video.

#### 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

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAP-2116**

**3D Animation**

**Course Outcomes:**

After passing this course the student will be able to:

CO1: Understanding of 3d Animation and animation tools

CO2: Working on character animation

CO3: learning about facial animation

CO4: Importing and exporting assets and animation

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAP-2116**

**3D Animation**

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

Practical exercises to be implemented:

1. A moving toy car with wheel rotation
2. A ball hits a brick making it fall
3. Bouncing Ball
4. Walk cycle
5. Run cycle
6. Facial Expression Animation
7. Lips synchronisation with audio

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

**Unit -I**

Introduction to 3D Animation, understanding of joints and rig of rigged characters, real time animation, graph editor and working with tangents. Basic 3D Animation, posing, basic animation of organic and inorganic models, Bouncing ball animation.

Maya Timeline, frame rate, Manual key & Auto Key, Animation Graph editor, playblast, Principles of Animation in MAYA, Posing, Create a Walk cycle

**Unit -II**

Creating an interaction between two characters, Creating and Animating grappling hook, Creating Anatomy of expression for facial Animation, Facial expressions' animation **Unit**

**-III**

Creating and animating realistic eyes, Basics of Facial Expressions with different Emotions, Understanding the Gestures and Postures. Understanding the importance of acting in animation,

**Unit -IV**

Body Language, Pulling, pushing, and lifting objects. Creating and animating a dialogue scene, Incorporate music / audio assets to a character

**Suggested Readings:**

1. Williams E. Richards, "The Animator's Survival Kit", Faber 3rd edition.
2. Roy Kenny, "How to Cheat in Maya 2014: Tools and Techniques for Character Animation", Focal Press
3. Rodriguez David, "Animation Methods", CreateSpace Independent Publishing Platform

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAD-2117**

**Assignment and Viva (Application of Software Tools and Techniques)**

**Course Outcomes:**

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

CO1: learn the application of principles of animation while working on a 2D animation assignment

CO2: have first-hand experience of the lifecycle of a project and the various stages of production

CO3: will be able to work on time-bound work.

CO4: develop a short 2D animation clip (minimum 750 frames)

**Master of Vocation (Animation and VFX) Semester-II**

**Course Code: MVAD-2117**

**Assignment and Viva (Application of Software Tools and Techniques)**

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

1. The students will work on a 2D Animation assignment in their own identified area of interest.
2. The student assignment will be evaluated on the following Criteria:
  - a) Technical Quality
  - b) Creative Quality
  - c) Appeal to the Target Audience
  - d) Success in conveying message right.
3. In the minor project the students need to apply the various principles of animation and techniques learned in the first two semesters to develop a short 2D animation clip (minimum 750 frames) on any topic of choice.
4. The marks will be given based on the submission of the assignment and viva-voce.

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAM-3111**

**Experimenting and Research in Animation**

**Course Outcomes:**

On completion of this course, the students will:

CO1: know the types and methodologies used in research

CO2: have know-how of data collection and analysis during research

CO3: be able to cite and reference using popular methods

CO4: have know-how of copyrights, IPRs and plagiarism and concerned provisions

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAM-3111**

**Experimenting and Research in Animation**

<b>L - T - P</b>	<b>Max. Marks: 100</b>
<b>3 - 0 - 1</b>	<b>Theory: 40 Practical: 30</b>
<b>Time: 3 Hours</b>	<b>CA: 30</b>

**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 Research & documentation:**

**Research in animation:** Definition and importance, types of research, characteristics and the process

**Unit -II**

**Data Collection and Analysis:**

Collection of data and its methods, Sampling methods, Data analysis and processing, Types of research data: text, graphics, videos etc.

**Unit -III**

**Citation methods and Referencing systems:**

Referencing and Citation: Different methods like Harvard, Owl etc., Citation manuals  
Bibliography, footnotes

**Unit -IV**

Copyrights, IPR and patents, Different aspects of IPR, Acknowledgement for references, Plagiarism

**Suggested Readings:**

Research Methodology: A Step-by-Step Guide for Beginners (Third Edition), Author: Ranjit Kumar, Pub: Sage Publication Ltd.

Research Methodology: Methods and Techniques second edition, Author: C.R Kathori, Pub: New Age International Publishers.

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAM-3112**

**Lighting, Texturing and Rendering**

**Course Outcomes:**

On completion of this course, the students will:

CO1: get to know about the different shading, properties, and application.

CO2: be able to use UV Mapping and Texturing

CO2: be able to apply lighting in interior and exterior scenes.

CO3: be able to learn and apply 3D rendering process.

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAM-3112**

**Lighting, Texturing and Rendering**

<b>L - T - P</b>	<b>Max. Marks: 100</b>
<b>3 - 0 - 1</b>	<b>Theory: 40 Practical: 30</b>
<b>Time: 3 Hours</b>	<b>CA: 30</b>

**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**

**UV Mapping and Texturing**

Unfolding Mesh, Cleaning and Adjustment of UV Layout, Exporting UV Map with different file format, Introduction to Hyper shade, Maya Material Lambert, Phong, Blinn, Phong E, Anisotropic Material, Surface Shader, Use Background, understanding 2D textures- Cloth, Applying Ramps, Bitmap, Working with Photoshop for Texture Painting, Difference between Bump map and Normal Map.

**Unit - II**

**Maya lighting:**

Lighting, Color and Composition, different Maya lights Point Light, Spotlight, Directional Light, Area Light, Ambient Light and its uses in specific areas. Depth map shadows, Raytraced shadows, creating soft shadows with spotlights, creating glass using refraction.

**Unit - III**

**Arnold Lights:**

Skydome lights, applying physical light shaders, applying image-based lighting, Photometric lights (IES).

**Unit - IV**

**Rendering:**

Render Engine Introduction- Maya Software, Maya Hardware, , Arnold Renderer Settings, CPU and GPU render setting, Image Based Lighting, Render Passes - Ambient Occlusion Pass, Creating Reflection, Depth, and Shadow Passes, Batch Rendering.

Render Setup- Choosing a Filename, Image Format, Frame Range, Camera, Setting Resolution, Selecting a Render Engine, Render Quality & Sampling (AA, Diffuse, Specular, Transmission, SSS, Volume indirect) Render View Window- Saving/Loading an Image, Keeping/Removing Image, Interactive Photorealistic Rendering(IPR) Render,

**Practical Exercises:**

Texture a 3D Cartoon character  
Create a night scene using Maya and  
mental ray lights Render any 3D product  
using different Render engine

**Suggested Readings:**

Todd Palamar, "Mastering Autodesk Maya 2016". Wiley  
Darakhshani Dariush, "Introduction to Autodesk Maya 2015". Autodesk

**Master of Vocation (Animation and VFX) Semester III**  
**Course Code: MVAP-3113**  
**Advance Digital Sculpting**

**Course Outcomes:**

On completion of this course, the students will:

**CO1:** Create complex character & models with high level of details.

**CO2:** understand the workflow of mesh

**CO3:** Create and use transferring textures

**CO4:** Understanding the Topology and UVs

**Master of Vocation (Animation and VFX) Semester III**  
**Course Code: MVAP-3113**  
**Advance Digital Sculpting**

<b>L - T - P</b>	<b>Max. Marks: 100</b>
<b>3 - 0 - 1</b>	<b>Practical: 70</b>
<b>Time: 3 Hours</b>	<b>CA: 30</b>

**Practical Exercises to be implemented**

1. Working on basic sculpting
2. Creating basic 3d sculpting model
3. Creative mesh from zsphere
4. Creating final 3d model using zphere

**Unit I**

**Understanding of z-modeler workflows, reverse engineering techniques in Z-brush:** Using Q mesh, working with targets, Dynamic subdivision, and Edge loop. Using scanned data for modeling, creating single poly surface, adding thickness, splitting the inner and outer parts.

**Unit II**

**Micro mesh techniques:** Micromesh basics, Polygon orientation, creating a tiled mesh, Using Micromesh with Fiber mesh.

**Unit III**

**Fiber techniques:** Working with fiber mesh, Creating grass, Creating human hair, Animal fur, Creating Fibers using Morph targets.

**Unit IV**

**Pipeline integration with Maya:** File transfer format, Exporting and importing geometry, Transferring textures, Changing topology, Updating UVs, Converting fiber mesh into hair and fur.

**Suggested Readings:**

**Text Books:**

- 1) Spencer, Scott, (12 January 2010), ZBrush Digital Sculpting: Human Anatomy, Sybex; Pap/DVD edition.
- 2) Spencer, Scott, (4 February 2011), ZBrush Character Cration: Advanced Digital Sculpting, Sybex; 2nd Edition edition.

**Master of Vocation (Animation and VFX) Semester III**  
**Course Code: MVAP-3114**  
**Advance Motion Graphics**

**Course Outcomes:**

On completion of this course, the students will:

- 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

**Master of Vocation (Animation and VFX) Semester III**  
**Course Code: MVAP-3114**  
**Advance Motion Graphics**

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

**Practical Exercises:**

Creating an Image Slide show  
Create any commercial Advertisement for social media.  
Cinematic Title Animation with sound  
Creating a text Animation with following the path  
Shatter effect.

**Syllabus to be covered for practical:**

**Unit I**

Introduction to After effects, frame rate, Composition and settings, layers, Key-framing and Transform, Workflow, Exporting and File Formats, Masks, Layer Modes, Basic Effects **Unit**

**II**

Understanding Animation basics in after effects, Types of keys, Introduction to graph editor, Layer Properties, 3D Layers, adjustment layer, shy layer & Null, Nesting, Pre-composing, Non-destructive Workflow

**Unit III**

Color Correction in After Effects, Manipulating Footage, Introduction to tracking (2D and 3D Tracking, Feature Tracking, Four Point Tracking), Text & Title effect, introduction to 3rd party plugins.

**Unit IV**

Rendering: Fundamentals of rendering and exporting, Using Render Queue. Exporting still images and sequences, Learning output formats.

**Suggested Readings:**

Adobe "Adobe After Effects CC Classroom in a Book", Pearson Education India  
Perkins Chad, "How to Cheat in After Effects", Focal Press

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAP-3115**

**UI/UX Designing**

**Course Outcomes:**

On completion of this course, the students will:

CO1: Learning about UI / UX Designing.

CO2: Importing and arranging elements for creation

CO3: Assigning controls and working of the design

CO4: Finalizing and publishing the design.

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAP-3115**

**UI/UX Designing**

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

**Practical Exercises:**

1. Creating elements
2. Designing Basic Mobile UI
3. Creating UI/UX for Mobile /Tablet

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

**Unit -I**

Creating New Files & Designing on Grid, file Setting up artboards, Importing text, Creating colored backgrounds for text, Importing photo as an image fill (crop a photo) Rounding corners, Importing & modifying vector graphics Aligning & distributing layers, Layer opacity vs. fill opacity Reusing colors (color swatches) Adding drop shadow, Creating & Editing Character Styles

**Unit -II**

Creating Repeat Grid, Customizing content, Creating & editing components, Overriding content in one instance vs. globally updating all components, Detaching component, Linking between art boards, Preview prototype, Creating an overlay, Background blur, Fixing position of elements, Exporting individual assets, Exporting art boards, Sharing XD file, Commenting on shared files, Pinning comment, Updating an existing shared file

**Unit -III**

Creating Stack & Adjusting Spacing, Responsive Resize, Stacks, & Padding, Keystrokes for Working with Stacks & Padding, Nesting Stacks, Making Links (Scroll Up/Down Page), Making Navbar Fixed to Screen, Adjusting Position & Speed of Scroll, Creating Scrollable Area Within Page, Basics of Auto-Animate, Types of Easing, Adding Timed Animation, Setting Up Parallax Assets, Building Parallax Animation, Adding Hover State to Button, Creating Toggle State

**Unit -IV**

Adding 3D Transforms, Front to Back versus Z Position, Creating a Working Slideshow Prototype, Adding Tap Interactions, Adding the Ability to Drag, Adding Keystrokes, Adding a Drag Interaction, Adding a Time Interaction, Adding a Sound Effect, Publishing a Library, Using an XD Library

**Suggested Readings:**

1. Brian Wood, "Adobe XD Classroom in a Book", (1<sup>st</sup> Edition) Adobe Press
2. Brian Wood, "Adobe XD CC Classroom in a Book", (1<sup>st</sup> Edition) Adobe Press

**Master of Vocation (Animation and VFX) Semester III**  
**Course Code: MVAP-3116**  
**Visual Effects (VFX)**

**Course Outcomes:**

On completion of this course, the students will:

CO1: learn compositing while working with footages

CO2: learn to use various effects and tools to generate Visual effects

CO3: learn to apply dynamic simulation i.e. fire, dust, rain etc.

CO4: be able to demonstrate their work confidently with After Effects/3D Maya software

## Master of Vocation (Animation and VFX) Semester III

Course Code: MVAP-3116

### Visual Effects (VFX)

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

#### Practical Exercises:

1. Green screen effect and compositing
2. 3D Text Animation
3. Day to Night Conversion
4. Rain scene
5. Creating a scene 2D & 3D Tracking

#### Syllabus to be covered for the practical:

##### Unit -I

**Working with footages:** Setting up project, removing frames, naming, finding and deleting footages, learning file size limitations. Changing and replacing transitions. **Compositing:** Alpha Channel, Using Blending modes, Blur and Sharpen, Creating, saving and back up of projects, modes and switches. Mask and transparent layers. Pre-composing. Using color depth and HDR colors. Color correction and color adjustment. Using layer markers, composition. Using 3D layers and understanding co-ordinate system in Adobe After Effects. Light Layer, Null Layer and Adjustment Layer.

##### Unit -II

**Effects and Tools:** Text effects, Blur and Sharpen effects. Essentials of Chroma and keying. Concept of Garbage matte. Using hold-out matte. Using plug-in effects like CC Snow, CC Rain, CC Blur effects etc. Learning Tracking fundamentals, using trackers and stabilizing footages. Using four corner pins to track, using pen tool to draw custom shapes and masks. Text tool. Eraser, Puppet Pin and 3D camera

##### Unit -III

**3D for VFX:** Dynamics Simulation (fire, dust, smoke, blast, Natural Phenomena like rain, Lightning, Volcano etc.),

##### Unit -IV

**Maya Particles:** Different types of Emitters and their working, particle collision, colouring particles, animation using per particle attribute, functioning of instance with examples, goal weights, use of particle fields, creating pyro techniques, sparks, bullet trails, fire using particles & Compositing.

#### Suggested Readings:

Lisa Fridsma, "Adobe After Effects CC Classroom in a Book", Adobe

Eran Dinur, The Filmmaker's Guide to Visual Effects: The Art and Techniques of VFX for Directors, Producers, Editors and Cinematographers

**Master of Vocation (Animation and VFX) Semester III**  
**Course Code: MVAD-3117**  
**Minor Project**

**Course Outcomes:**

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

CO1: apply various tools and techniques studied during the course on a practical usage

CO2: will get experience of specific requirements and outcome of different stages of any 2D/3D assignment

CO3: get to know how to tailor the project as per the target audience and make it more realistic and relevant

CO4: The students also learn to manage assignments.

**Master of Vocation (Animation and VFX) Semester III**

**Course Code: MVAD-3117**

**Minor Project**

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

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

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

1. Students can choose themselves the subject matter and scenes
2. Minimum of 1000 frames
3. Use at least two different software
4. Effective use of cameras, focus on viewers' attention
5. A report showcasing the stages of the assignment

**Master of Vocation (Animation and VFX) Semester IV**

**Course Code: MVAM-4111**

**Career Management**

**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

**Master of Vocation (Animation and VFX) Semester IV**

**Course Code: MVAM-4111**

**Career Management**

<b>L - T - P</b>	<b>Max. Marks: 100</b>
<b>4 - 0 - 2</b>	<b>Theory:40 Practical: 30</b>
<b>Time: 3 Hours</b>	<b>CA: 30</b>

**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**

**Career opportunities in Animation:**

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

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

**Unit II**

**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

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

**Unit IV**

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: -**

Students must submit Digital Portfolio/Showreel as practical assignment.

**Suggested Readings:**

Chaturvedi PD, Chaturvedi Mukesh,” Business Communication: Skills, Concepts, and Applications”, Pearson Education India

Robin Ryan, “60 Seconds and You're Hired! Revised Edition”, Penguin Books Joan van Emden, Lucinda Becker, “Presentation Skills for Students”, Palgrave David Barron,

“Resume: The Definitive Guide on Writing a Professional Resume to Land You Your Dream Job”, CreateSpace Independent Publishing Platform 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

**Master of Vocation (Animation and VFX) Semester IV**

**Course Code: MVAM-4112**

**Digital Art Copyrights**

**Course Outcomes:**

On completion of this course, the students will:

CO1: become aware of various copyright laws applicable to digital Art CO2:

be able to know how to claim authorship/ownership over digital artwork CO3:

be educated about copyright registration process

CO2: understand copyright infringements

**Master of Vocation (Animation and VFX) Semester IV**

**Course Code: MVAM-4112**

**Digital Art Copyrights**

<b>L - T - P</b>	<b>Max. Marks: 100</b>
<b>4 - 0 - 2</b>	<b>Theory:40 Practical: 30</b>
<b>Time: 3 Hours</b>	<b>CA: 30</b>

**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**

**Copyrights:** Introduction, Definition, rationale of copyright protection, classes of Copyrights protection available in India, Different types of work (artistic, music, Cinematography etc),

**Unit II**

**Authorship and Ownership:** Whose rights are protected by Copyright, who has rights on artistic, dramatic and musical work, sound recording, rights of adaptation, rights of communication to public, performers rights, broadcaster rights, moral rights

**Unit III**

**Registration of Copyright:** Guideline of copyright act, Procedure, Term of Copyright, Administration of Copyright law, Collective administration of copyrights

**Unit IV**

**Copyrights infringements:** Common types of copyright infringements, legal remedies

**Suggested Readings:**

A Handbook of Copyright law, Govt of India, MHRD, Dept of Secondary and Higher Education

**Master of Vocation (Animation and VFX) Semester IV**  
**Course Code: MVAI-4113**  
**Industrial Training and Report Writing**

**Course Outcomes:**

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

**Master of Vocation (Animation and VFX) Semester IV**

**Course Code: MVAI-4113**

**Industrial Training and Report Writing**

<b>L - T - P</b>	<b>Max. Marks: 250</b>
<b>0- 0 - 18</b>	
<b>Time: 3 Hours</b>	

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