FACULTY OF VOCATIONAL STUDIES

SYLLABUS FOR

MASTER OF VOCATION - M.Voc.(Animation and VFX)
(Semester – I & II)

(Under Credit Based Continuous Evaluation Grading System)

Session: 2018-19

The Heritage Institution

KANYA MAHA VIDYALAYA
JALANDHAR
(Autonomous)

MASTER OF VOCATION(M.VOC.) PROGRAMME

Session 2018-19

PROGRAMME OUTCOMES: Students opting for M.Voc. 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 are able to 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 M.Voc. Programmes 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 and Post Production**.**

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. (Graphic design, 3d modelling, texturing & Lighting, rigging & animation, video editing & 3D architectural design)

Syllabus Scheme - M.Voc (Animation and VFX)

Semester I

Course Code	Course Title	Course Type	Hours/week	Credits L-T-P	Credits Total	Marks Total	Marks Ext. L	Marks Ext. P	CA	Examination Time in Hours
MVAM-1111	Foundation Course –I	C	4	2-0-2	4	50	25	15	10	3(Theory) 3(Practical)
MVAL-1112	Fundamentals of Design and Animation	C	4	4-0-0	4	50	40	-	10	3(Theory)
MVAM-1113	Basics of Photography	C	4	2-0-2	4	100	30	50	20	3(Theory) 3(Practical)
MVAM-1114	Introduction to 2D & 3D Animation	S	4	2-0-2	4	100	30	50	20	3(Theory) 3(Practical)
MVAM-1115	Graphic Designing – Advanced	S	4	2-0-2	4	100	30	50	20	3(Theory) 3(Practical)
MVAP-1116	Project – I & Field Visit	S	-	0-0-4	4	100	-	80	20	3(Practical)
MVAI-1117	Internship	S	-	0-0-6	6	50	-	50	-	-
	Total				30	550				

Semester-II

Course code	Course Title	Course Type	Hours/week	Credits L-T-P	Credits Total	Marks Total	Marks Ext. L	Marks Ext. P	CA	Examination Time in Hours
MVAM-2111	Workplace Health & Safety	C	4	2-0-2	4	50	25	15	10	3(Theory) 3(Practical)
MVAM-2112	Storyboarding, Animatics & Screenplay	C	4	2-0-2	4	75	30	30	15	3(Theory) 3(Practical)
MVAP-2113	Video Editing	C	8	0-0-4	4	75	-	60	15	3(Practical)
MVAL-2114	Project Management in Animation	S	4	4-0-0	4	50	40	-	10	3(Theory)
MVAP-2115	2D Digital Animation - Advanced	S	8	0-0-4	4	100	-	80	20	3(Practical)
MVAP-2116	3D Modeling in Maya - Advanced	S	8	0-0-4	4	100	-	80	20	3(Practical)
MVAP-2117	Minor Project – II	S	12	0-0-6	6	100	-	80	20	3(Practical)
	Total				30	550				

Note: C- Compulsory

S- Skill Enhancement

Course Outcomes:

On completion of this course, the students will:

CO1: get to know about the different medium and techniques of drawing and painting.

CO2: understand Light, shadow, surface and texture.

CO3: be able to understand the perspective, proportion, volume and its importance.

CO4: study and understand of human figure for better command in better character drawing.

L - T – P	Max. Marks: 50
2 – 0 – 2	Theory: 25 Practical: 15
Time: 3 Hours	CA: 10

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:
Introduction to object drawing, creating basic shapes and forms on a two-dimensional surface using geometry - structure, surface and texture, perspective and points of view, exploring line and the effects it can produce, Introduction of light and shadow on objects and an assessment and representation of the impact of light on simple forms and objects - change in mood, surface quality, density, drama, and impact.

Unit III

Perspective Drawing:
Perspective Drawing. Principles of perspectives, one point and two-point perspective. Perspective as applied to objects, furniture, interior and exteriors of the buildings, study of light and shade etc.
Nature Study:
Drawing from Nature, Location drawing and learning to represent trees, plants, bushes, shrubs, insects, birds, and animals with attention to structure and morphology, proportion, volume, and behavior.

Unit IV

Human Drawing:
Introduction to human figure drawing –Drawings from Mannequin, quick Sketching of human figure from out door, indoor. To capture the gestures of the human form, weight, balance, Rhythm and proportion.

Assignments:
Outdoor and indoor study human in action, study light and shade using still life,
Different poses of human, animal and birds
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:

1. Bancroft Tom, "Creating Character with Personality", Watson-Guptill
2. Victor Perard, "Anatomy and Drawing", Dover Publications
3. Hart Christopher, "Modern Cartooning: Essential Techniques for Drawing Today's Popular Cartoons", Watson-Guptill

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.

L - T – P	Max. Marks: 50
4 – 0 – 0	Theory: 40
Time: 3 Hours	CA: 10

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

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

Introduction of art and ideas - Visual & Critical thinking and analysis of 2-Dimensional Art through history Theoretical introduction to the Gestalt Laws of perception, phenomenology, and Definition of Design.

Unit - II

Visual Perception and Design - How do we SEE? [Seeing and observing]
Elements of design – To understand the design space and concepts of design. Visual elements - Line and shape, Form, value, texture, color -
Principles of Design. Unity and variety / element of interest, contrast, elaboration, Dominance, Expressive content. Color and composition – Balance, Harmony and rhythm

Unit - III

History of Animation and Pioneers:
Introduction to Animation, Overview of Film History and Basic Cinematic Terms and Concepts. Development of the Animation Industry
Early Disney's Cell Animation Processes (Model Sheet, Storyboarding Dialogue Recording, Inspirational Sketch, Rough Drawings, Cells, In-betweening, Clean ups, Inking, Master Background, Stop motion).

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.)

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:

1. Colin Ware, "Visual Thinking: for Design", Morgan Kaufmann
2. Williams E. Richards, "The Animator's Survival Kit", Faber 3rd Edition
3. Stephen Cavalier, "The World History of Animation", Univ of California Pr

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

SEMESTER I
Session 2018-19
COURSE CODE: MVAM-1113
Basics of Photography

L - T – P	**Max. Marks: 100**
2 – 0 – 2	**Theory: 30 Practical: 50**
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

Photography as a communication tool - Basics of visual composition - Visuals - Image Sizes - Camera Angles - Elements and Principles of picture composition –
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,
Element of photo (Aperture, Shutter Speed, Depth of Field, ISO)
Composition: Rule of Thirds, Golden Section, Head room, Frame within a frame, Symmetry
Photography golden hours, Post shoot processing of photographs

Unit - III

Image Editing
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 and techniques – History – Retouching tools – Layers – Photo mounting techniques – Incorporation of text into picture.

Unit - IV

Digital Manipulation: Applying selective effects to images and filters with masks and different digital darkroom effects.
Digital Output : Placing photos in other documents – Using photos on the web.
Printers as output devices – Different types of Print, Proofing, Photo quality printing. How can a digital image be printed.

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:

1. How to Create Stunning Digital Photography, "How to Create Stunning Digital Photography", Mason Press
2. Al Judge, "Mastering Aperture, Shutter Speed, ISO and Exposure", Subtle Visions Media
3. Bryan Peterson, "Understanding Exposure", Amphoto Books

Introduction to 2D & 3D 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 Maya & Flash

CO2: work in 3d & 2D platform using basic techniques.

CO3: understand the production pipeline of 2d & 3d better by hands-on and practice

CO4: apply different animation techniques/ animation principles learned so far in the course.

L - T – P	Max. Marks: 100
2 – 0 – 2	Theory: 30 Practical: 50
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.

2D Animation:

Unit I

Introduction to Adobe Flash, Workspace overview, Using the Stage and Tools Panel, understanding timeline tools and their usage, Property inspector - Library panel - Movie Explorer - History panel - color panel, Understanding layers, Basics of Animation in Flash, Methods of Animation,

Unit II

Technical Animation creation. Drawing in Flash - choosing colors, choosing line style, designing and alignment of elements, drawing panels - Time-line animation - applying layer type - adding sounds. Working with project - Importing artwork into Flash.

3D Animation:

Unit III

Overview of 3D Production Pipeline, Concepts and methods of 3D Modeling, understanding a 3D environment, Creating and editing projects, Understanding and exploring Maya Interface, creating basic primitive objects

Unit IV

Creating a Project in Maya, about Project Settings
Saving Files and File Types: about .ma and. mb file types.
Viewing Geometry (Navigation), reviewing the Viewport menus,
Quick layout buttons, Change and resize panels, Change the display of objects.

Suggested Readings:

1. Adobe Creative Team, "Adobe Flash Professional CS6 Classroom in a Book", Adobe
2. Georgenes Chris, "How to Cheat in Adobe Flash CC: The Art of Design and Animation", Focal Press
3. Darakhshani Dariush, "Introduction to Autodesk Maya 2015". Autodesk
4. Palamar Todd, "Mastering Autodesk Maya 2016". Wiley

SEMESTER I

Session 2018-19
COURSE CODE: MVAM-1115
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

L - T – P	Max. Marks: 100
2– 0 – 2	Theory: 30 Practical: 50
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

- **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, Bitmap 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.

Unit II

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

Unit III

Effects and Tools:
Using filters, Liquefy, vanishing tools, Clipping Mask, managing layers and groups, Clone tool, Spot healing tool, Patch tool, using Crop and gradient tool, content aware tool, refine edges, Changing Levels, Curves, Color Balance, Brightness & Contrast, Using Histogram and Gradient Map. Layer Styles, Blending modes, Gif animation.

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. Using Action palette & Create action set What is a Smart Object, Non-Destructive Transformations with a Smart Object

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,

Assignments:
1. Print Design: Visiting Card, Letter Head,
2. Calendar for an Animation Studio/Office.
3. Magazine Advertisement,
4. Newspaper ad full page and half page and quarter page.
5. Poster Design: Poster for an Animation Movie.
6. A Digital Painting, A background Design or a character design.
7. Web Banners
8. Book Cover Design

Suggested Readings:
1. Alex W. White, "The Elements of Graphic Design", Allworth Press
2. Adrian Shaughnessy, "How to Be a Graphic Designer without Losing Your Soul", Princeton Architectural Press
3. David Sherwin, "Creative Workshop: 80 Challenges to Sharpen Your Design Skills", HOW Books
4. Ellen Lupton, "Thinking with Type", Princeton Architectural Press
5. Danae Lisa, "Adobe Photoshop CC Bible", Wiley
6. Faulkner Andrew,"Adobe Photoshop CC Classroom in a Book", Pearson Education
7. https://www.youtube.com/watch?v=ZK86XQ1iFVs

Course Outcomes:

The students will be taken for Industry Visits and put under the guidance of an external resource person from the Industry / Research / Similar Organization

The Project and Industry visit will help the students:

CO1: to get the exposure of live project in different fields of designing/animation/editing.

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

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

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

Industry Visit:
Animation Studio – 2D / 3D
Graphic Design Studio
Project-I
Portfolio

Course Outcomes:

The students will be taken undergo internship that will help them to:

CO1: get hands-on a live project in different fields of designing/animation/editing.

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

CO3: learn interacting and communicating within a team.

L - T – P	Max. Marks: 50
0 – 0 – 6	
Time: 3 Hours	

Note: The students will undergo minimum 30 days of internship (6 hours/day) and will get awards on the basis of their performance and attendance during the internship.

Workplace Health & Safety

Course Outcomes:

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

CO1: understand various workplace-related hazards, emergency situations

CO2: understand and observe safety guidelines

CO3: will learn to know the types, symptoms and ways to handle medical conditions

L - T – P	Max. Marks: 50
2 – 0 – 2	Theory: 25 Practical: 15
Time: 3 Hours	CA: 10

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:

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

Storyboarding, Animatics & 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.

L - T – P	Max. Marks: 70
2 – 0 – 2	Theory: 30 Practical: 30
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
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

SEMESTER II
COURSE CODE: MVAP-2113
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.

L - T – P	Max. Marks: 75
0 – 0 – 4	Practical: 60
Time: 3 Hours	CA: 15

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

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

Project Management in Animation

Course Outcomes:

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

CO1: the various stages of project starting from planning, through production and finally to post production.

CO2: learn managing a project observing timeframe/deadlines of various deliverables.

CO3: know how various project management tools help to manage projects effectively.

L - T – P	Max. Marks: 50
4 – 0 – 0	Theory: 40
Time: 3 Hours	CA: 10

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
Project Management in Animation: Overview and need, Prerequisites and deliverables.
Introduction to Animation process: The production process from script to screen, popular forms of animation, delivery mechanisms, Designing the process

Unit – II
Scheduling: Understanding project requirements, breaking it down, planning for deadlines, resource management, budget allocation.
Task lists: Creating and using Task lists at various phases of an Animation project

Unit – III
Data management: Recording, Tracking, Transfer, tools, Asset management and Handling.
Communication: Modes
Monitoring projects: using Gantt Charts to monitor the project progress and milestones
Introduction to various Project Management tools

Unit – IV
Delivery Process: The Client Specifications, Delivery checklists, packaging, paperwork and delivery of project
Opinions: Artists viewpoint, Client perspective, Client Relations, Cost Control, Training.

Suggested Readings:
1. Ranjit Singh, "The Art of Animation Production Management ", Macmillan Publishers
2. Catherine Winder, Zahra Dowlatabadi, "Producing Animation", Routledge; 2 edition

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

COURSE CODE: MVAP-2115
2D Digital Animation - Advanced

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

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
An introduction of the various drawing and painting tools in Adobe Flash and their uses and procedures. Working with the Flash timeline. Differentiating between key frames and regular frames. Frame-by-frame animation. Setting the frame rate.
Shape Tween, Motion Tween and Symbols: "Morphing" objects by means of shape tweening, using shape hints, Shape-tweening text, using shape tweens for mouth movement, Fixing broken tweens. Creating symbols and organizing them in the Library. Modifying symbols. Tweening an instance's appearance and location on the stage. Using motion guides. Putting animation inside symbols.

Unit - II
Bitmaps, Masks, Text and Special Effects: Importing and modifying photos and bitmapped images. Dealing with image compression. Working with transparent backgrounds. Auto-tracing. Creating masks. Animating masks and masked objects. Applying a mask to multiple objects. Formatting and editing text.Using blending modes. Applying filters to movie clip instances. Tweening filters.

Unit - III
Character Design: Designing cartoon characters that are simple, expressive, and easy to animate, Using symbols as building blocks for character construction. Jointing limbs
Using frame-by-frame animation and motion tweens to give lifelike movement to characters. Using the Bone and Bind tools to create realistically joined characters. Creating and animating armatures, Animating a Walk cycle.

Unit - IV
Sound, Layout and Final Production: Importing sound files. Cutting and synchronizing sound with timeline animation. Lip-syncing to dialogue, Scene layout procedures and proper scene set up in preparation of final production.

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

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, Nurbs modelling, polygon modeling

CO2: create a 3D model of an interior or exterior

CO3: model a 3D character with blend shapes

COURSE CODE: MVAP-2116

3D Modeling in Maya- Advanced

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

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:
1. Kelly Murdoch, "Autodesk Maya 2018 Basics Guide", SDC Publications
2. Prof Sham Tickoo, "Autodesk Maya 2018: A Comprehensive Guide", Cadcim Technologies
3. Chris Legaspi, "Anatomy for 3D Artists: The Essential Guide for CG Professionals", 3dtotal Publishing
4. Kelly Murdoch, "Autodesk Maya 2018 Basics Guide", SDC Publications

Minor Project - II

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 project

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

CO3: develop a short 2D animation clip (minimum 750 frames)

L - T – P	Max. Marks: 100
0 – 0 – 6	Practical: 80
Time: 3 Hours	CA: 20

1. The students will work on a 2D Animation project (e-learning based) 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. 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 on the basis of the submission of the project and viva-voce.