Savitribai Phule Pune University

Skill Development Centre

BATCHELOR IN VOCATIONAL **(B.Voc.)** 2020-21

Digital Art and Animation

(3 years Degree Course)

Pune District Education Association's

Anantrao Pawar College, Pirangut, Pune.

Objective

- To provide judicious mix of skills relating to a profession and appropriate content of General Education.
- To ensure that the students have adequate knowledge and skills, so that they are work ready at each exit point of the program.
- To provide flexibility to the students by means of pre-defined entry and multiple exit points.
- To integrate NSQF within the undergraduate level of higher education in order to enhance employability of the graduates and meet industry requirements. Such graduates apart from meeting the needs of local and national industry is also expected to be equipped to become part of the global workforce.
- To provide vertical mobility to students coming out of 10+2 with vocational subjects.
- Demonstrate creativity and technical expertise for content creation
- Promote and develop the opportunities in the field of multimedia where as students can be eligible to demonstrate and explore the skills acquired.
- Develop in house capabilities to create talent with the ongoing revolution of media requirements.

SEM 1 – Digital Design

CODE	SUBJECT	HOURS/DAY	LECTURES	TH	PR	CREDIT
BVOC 101	Concept of Graphics and Digital Art	1	36	T		4
BVOC 102	Digital Design I, II, III	1	36	T		4
BVOC 103	Motion Graphics	1	36	T		4
BVOC 104	Digital Design Assessment's	4	30		P	6
BVOC 105	Creating social Media infographics Video content	4	30		P	6
BVOC 106	Hands on Training (Project - Branding)	6	15		P	6
Total			285	3	3	30

SEM 2 – Film Making

CODE	SUBJECT	HOURS/DAY	LECTURES	TH	PR	CREDIT
BVOC 107	Photography Fundamentals	1	36	T		4
BVOC 108	Cinematography Fundamentals	1	36	T		4
BVOC 109	Audio Video Editing	1	36	T		4
BVOC 110	Outdoor/Product theme-based Photography	4	30		P	6
BVOC 111	Creating a Live action short film	4	30		P	6
BVOC 112	Hands on Training (Project – Film Making)	6	15		P	6
TOTAL			285	3	3	30

SEM 3 – 2D Animation

CODE	SUBJECT	HOURS/DAY	LECTURES	TH	PR	CREDIT
BVOC 113	Preproduction	1	36	T		4
BVOC 114	Stop Motion Animation	1	36	T		4
BVOC 115	2d Animation	1	36	T		4
BVOC 116	Drawing Assessment's	4	30		P	6
BVOC 117	2d Animation Project	4	30		P	6
BVOC 118	Hands on Training (Project – 2D/stop Motion Anim)	6	15		P	6
	TOTAL		285	3	3	30

SEM 4 – Arch design, Communication and Personality development

CODE	SUBJECT	HOURS/DAY	LECTURES	TH	PR	CREDIT
BVOC 119	Communication and Personality Development	1	36	T		4
BVOC 120	3D Architectural Design and Visualization	1	36	T		4
BVOC 121	3d Product Design	1	36	T		4
BVOC 122	AutoCAD Plan submission for a 2 BHK House	4	30		P	6
BVOC 123	3d Product Packshot	4	30		P	6
BVOC 124	Hands on Training (Arch. Design walkthrough)	6	15		P	6
	TOTAL		285	3	3	30

SEM 5 - 3d Animation

CODE	SUBJECT	HOURS/DAY	LECTURES	TH	PR	CREDIT
BVOC 125	3d Design – 3d Pipeline, Modelling, Texturing	1	36	T		4
BVOC 126	3d Design - Rigging, Animation, Dynamics	1	36	T		4
BVOC 127	3d Design - Lights, Camera, Render	1	36	T		4
BVOC 128	3d Animation Assessment's	4	30		P	6
BVOC 129	Presentation on 3d Animation production Pipeline	4	30		P	6
BVOC 130	Hands on Training (Project – 3D Animation Film)	6	15		P	6
			285	3	3	30

SEM 6 – Visual Effects

CODE	SUBJECT	HOURS/DAY	LECTURES	TH	PR	CREDIT
BVOC 131	Introduction to Vfx, Roto and Paint	1	36	T		4
BVOC 132	Tracking, Matchmove and Rotomation	1	36	T		4
BVOC 133	Greenscreen, Matte painting And Compositing	1	36	T		4
BVOC 134	Visual FX Assessment	4	30		P	6
BVOC 135	Green Screen Shoot Outdoor/indoor Practical	4	30		P	6
BVOC 136	Hands on Training (Project – VFX Film Making)	6	15		P	6
		30	4	30	4	30

Course Type: Core Credit Course Code: BV101

Paper – 1: **Concept of Graphics and Digital Art**

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1) Learn design aspects and able to explore the emerging needs and technology for a good design.
2) To learn how to write for print and web color models
3) Students must be able to manipulate type to convey precisely what's intended and demonstrating the impact importance of good typography.
4) Create a design which can have impact of a good idea with the help of all design necessities.

Outcome

1) Students will be able understand and design the industry requirement for digital design.
2) This semester gives an all-round experience of modern trends inside design industry.
3) Latest toolsets with core techniques and ample of design theory to build Brand identity, promotional branding, social media content.
4) This includes UI UX Design, Motion Graphic, infographics, Print Media, web, apps mockups and so on.

Course Content - Multimedia and Computer Graphics

Chapter 1	Introduction to Computer Graphics and Display Systems	2 Hours

1.1. Image and objects
1.2. Image representation
1.3. Basic graphics pipeline
1.4. Raster and vector-based graphics
1.5. Applications of computer graphics
1.6. Display devices
1.7. Cathode ray tubes
1.8. Raster-scan display
1.9. Random-scan display
1.10. Characteristics of video display devices
1.11. Flat panel display
1.12. Volatile displays
1.13. Static flat-panel displays
1.14. 3D display technology
1.15. Input technology

1.16. Touch screens
1.17. Light pen
1.18. Graphics tablets Hard-copy output devices

Chapter 2	Color Models	2 Hours

2.1. Types of colors
2.2. Color models
2.3. RGB color model
2.4. CMYK color
2.5. HSV color model
2.6. Industry and color models
2.7. Film colors
2.8. Bit depth
2.9. Film formats and color modules

Chapter 3	Coordinate system	1 Hours

3.1. Coordinate system overview
3.2. Cartesian coordinate system
3.3. Polar coordinate systems
3.4. Three-dimensional polar (or spherical) coordinate systems
3.5. Cylindrical coordinate systems
3.6. Conversion of coordinate systems

Chapter 4	Graphics Output Primitives	1 Hours

4.1. Curve Generation
4.2. Area Filling and Solid Area Scan-Conversion
4.3. Two-Dimensional Transformation
4.4. Two-Dimensional Viewing and Clipping
4.5. Three-Dimensional Transformation, Viewing and Projection
4.6. Surface Generation
4.7. Visible and Hidden Surfaces

Chapter 5	Object-Rendering	3 Hours

5.1. Introduction
5.2. Light modeling techniques
5.3. Illumination model
5.4. General illumination model
5.5. Intensity attenuation
5.6. Contribution of ambient light
5.7. Specular light and Phong model
5.8. Shading
5.9. Flat shading
5.10. Polygon mesh shading
5.11. Gouraud shading model
5.12. Phong shading
5.13. Transparency effect
5.14. Shadows
5.15. Types of shadows

5.16. Shadow algorithms
5.17. Texture and object representation
5.18. Steps in texture mapping
5.19. Types of texture mapping

5.20. Procedural textures
5.21. Ray tracing
5.22. How ray tracing works
5.23. Limitations of ray tracing
5.24. Ray casting
5.25. Radiosity

Chapter 6	**Computer Animation**	2 Hours

6.1. Introduction
6.2. Key frame animation
6.3. Construction of an animation sequence
6.4. Motion control methods
6.5. Methods based on geometric and kinematics information
6.6. Methods based on physical information
6.7. Methods based on behavioral information
6.8. Procedural animation
6.9. Key frame animation vs. procedural animation
6.10. Introduction to morphing
6.11. Intermediate images
6.12. Mapping orders
6.13. Warping techniques
6.14. Mesh warping
6.15. Feature-based image warping
6.16. Thin-plate spline-based image warping
6.17. Three-dimensional morphing
6.18. Shape transformation mechanisms
6.19. Volumetric three-dimensional models
6.20. Shape transformation for polyhedral objects

Chapter 7	**Introduction to Virtual Reality**	2 Hours

7.1. Introduction
7.2. Classical components and design of a VR system
7.3. Classical components of VR system
7.4. Important factors in a virtual reality system 12
7.5. Visual realism
7.6. Image resolution
7.7. Frame rate
7.8. Latency
7.9. Types of virtual reality systems
7.10. Immersive VR
7.11. Telepresence
7.12. Augmented reality
7.13. Fish tank VR
7.14. Advantages of virtual reality
7.15. VR Input devices
7.16. Three-dimensional position trackers
7.17. Navigation and manipulation interfaces
7.18. Gesture interfaces
7.19. Understanding AR VR

Typography and Corporate Identity		
Chapter 1	Typeface Anatomy	1 Hours

1.1. Size
1.2. Scale
1.3. Type Classification
1.4. Type Families
1.5. Superfamilies
1.6. Caps and Small Caps
1.7. Mixing Typefaces
1.8. Punctuation
1.9. Typeface Design
1.10. Project: Letterforms
1.11. Font Format.

Chapter 2	Text	2 Hours

2.1. Kerning
2.2. Tracking
2.3. Project: Space and Meaning
2.4. Line Spacing
2.5. Alignment
2.6. Project: Alignment
2.7. Vertical Text
2.8. Making Paragraphs
2.9. Enlarged Capitals
2.10. Hierarchy
2.11. Project: Hierarchy
2.12. Project: Long Lists

Chapter 3	Grid	2 Hours

3.1.
3.2. Golden Section
3.3. Multicolumn Grid
3.4. Modular Grid
3.5. Project: Modular Grid

Principles of Design and Concept of Advertisement		
Chapter 1	Principles of Design	3 Hours

1.1. Unity
1.2. Balance
1.3. Visual Tension
1.4. Rhythm
1.5. Proportion
1.6. Contrast
1.7. Texture
1.8. Directionality
1.9. The Three-Dimensional Field
1.10. Depth
1.11. Overlap
1.12. Relative Size
1.13. Vertical Location
1.14. Left/Right
1.15. Linear Perspective
1.16. Foreshortening

1.17. Chiaroscuro
1.18. Atmospheric Perspective
1.19. Forces of Visual Organization

1.20. The Line
1.21. The sinuous Line
1.22. Compositional Triangles
1.23. Horizontals, Verticals, and Diagonals
1.24. The Power of the Edge: The Frame
1.25. Open and Closed Frame
1.26. Frame within a Frame
1.27. Balanced and unbalanced Frame
1.28. Positive and Negative Space
1.29. Movement in the Visual Field
1.30. The Rule of Thirds
1.31. Rules of Composition for People
1.32. Headroom
1.33. Nose room
1.34. Other Guidelines

Chapter 1	Concept of Advertisement	4 Hours

1.1. What is advertising?
1.2. AIDA Principle.
1.3. Purpose of advertising
1.4. Types of advertising
1.5. Classification
1.6. Budget of advertising
1.7. Role and functions
1.8. Classification

Reference books

- Express Learning - Computer Graphics and Multimedia (English, Paperback, ITL Education Solutions Limited)
- Computer Graphics with Virtual Reality System Paperback
- The Advertising Concept Book
- Typographic Design (English, Paperback, Carter Rob)
- Design, Typography etc. (English, Hardcover, Gautier Damien)
- Thinking with Type -Jefferey Zeldman.
- Building a Story Brand: Clarify Your Message So Customers Will Listen
- Universal Principles of Design

Sem 1 – Digital design FY B.Voc

Course Type: Core Credit Course Code: BV102

Paper-II: Digital Design I - Adobe Photoshop, Illustrator, InDesign

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE:50Marks

Objective

1. Learn design aspects and able to explore the emerging needs and technology for a good design.
2. To learn how to write for print and web color models
3. Students must be able to manipulate type to convey precisely what's intended and demonstrating the impact importance of good typography.

Outcome

1. Students will be able to understand about computer graphics.
2. Students can create a concept-based design as per the subject and theme.

Chapter 1	Getting to Know the Work Area	2 Hours

1. Starting to work in Adobe Photoshop
2. Using the tools
3. Sampling a color
4. Working with tools and tool properties
5. Undoing actions in Photoshop
6. More about panels and panel locations

Chapter 2	Basic Photo Corrections	2 Hours

1. Strategy for retouching
2. Resolution and image size
3. Opening a file with Adobe Bridge
4. Straightening and cropping the image in Photoshop
5. Adjusting the color and tone
6. Using the Spot Healing Brush tool
7. Applying a content-aware patch
8. Repairing areas with the Clone Stamp tool
9. Sharpening the image

Chapter 3	3. Working with Selections	2 Hours

1. About selecting and selection tools

2. Getting started
3. Using Cloud Documents
4. Using the Magic Wand tool
5. Using the Quick Selection tool
6. Moving a selected area
7. Using the Object Selection tool
8. Manipulating selections
9. Selecting with the lasso tools
10. Rotating a selection

11. Selecting with the Magnetic Lasso tool
12. Selecting from a center point
13. Resizing and copying a selection
14. Cropping an image

Chapter 4	4. Layer Basics	2 Hours

1. About layers
2. Getting started
3. Using the Layers panel
4. Rearranging layers
5. Applying a gradient to a layer
6. Applying a layer style
7. Adding an adjustment layer
8. Updating layer effects
9. Adding a border
10. Flattening and saving files

Chapter 5	5. Quick Fixes	2 Hours

1. Getting started
2. Improving a snapshot
3. Adjusting facial features with Liquify
4. Blurring a background
5. Creating a panorama
6. Filling empty areas when cropping
7. Correcting image distortion
8. Extending depth of field
9. Removing objects using Content-Aware Fill
10. Adjusting perspective in an image

Chapter 6	6. Masks and Channels	4 Hours

1. Working with masks and channels
2. Getting started
3. Using Select and Mask and Select Subject
4. Creating a quick mask
5. Manipulating an image with Puppet Warp
6. Using an alpha channel to create a shadow

Chapter 7	7. Typographic Design	2 Hours

1. About type
2. Getting started
3. Creating a clipping mask from type

4. Creating type on a path
5. Warping point type
6. Designing paragraphs of type
7. Adding a rounded rectangle
8. Adding vertical text

Chapter 8	8. Vector Drawing Techniques	3 Hours

1. About bitmap images and vector graphics
2. About paths and the Pen tool

3. Getting started
4. Drawing a shape with the Pen tool
5. Drawing a path traced from a photo
6. Converting a path to a selection and a layer mask
7. Creating a logo with text and a custom shape

Chapter 9	9. Advanced Compositing	4 hours

1. Getting started
2. Arranging layers
3. Using Smart Filters
4. Painting a layer
5. Adding a background
6. Using the History panel to undo edits
7. Upscaling a low-resolution image

Chapter 10	10. Painting with the Mixer Brush	3 hours

1. About the Mixer Brush
2. Getting started
3. Selecting brush settings
4. Mixing colors
5. Mixing colors with a photograph
6. Painting and mixing colors with brush presets

Chapter 11	11. Editing Video	2 hours

1. Getting started
2. About the Timeline panel
3. Creating a new video project
4. Animating text with keyframes
5. Creating effects
6. Adding transitions
7. Adding audio
8. Muting unwanted audio
9. Rendering video

Chapter 12	12. Working with Camera Raw	2 hours

1. Getting started
2. About camera raw files
3. Processing files in Camera Raw
4. Applying advanced color correction

Chapter 13	13. Preparing Files for the Web	2 hours

1. Getting started
2. Creating placeholders with the Frame tool
3. Using layer groups to create button graphics
4. Automating a multistep task
5. Designing with artboards

Chapter 14	14. Producing and Printing Consistent Color	2 hours

1. Preparing files for printing

2. Getting started
3. Performing a “zoom test”
4. About color management
5. Specifying color-management settings
6. Identifying out-of-gamut colors
7. Proofing document colors on a monitor
8. Bringing colors into the output gamut
9. Converting an image to CMYK
10. Saving the image as a CMYK EPS file
11. Printing a CMYK image from Photoshop

Chapter 15	15. Exploring Neural Filters	2 hours

1. Understanding Neural Filters
2. Getting started
3. Exploring the Neural Filters workspace
4. Improving complexion with Skin Smoothing
5. Combining Neural Filters

Reference books

- Photoshop Classroom in a Book
- Adobe Photoshop For Beginners: 2021

Digital Design I - Illustrator

Objective

5) Learn design aspects and able to explore the emerging needs and technology for a good design.
6) To learn how to write for print and web color models
7) Students must be able to manipulate type to convey precisely what's intended and demonstrating the impact

Outcome

1) Students will be able understand and design the industry requirement for digital design.
2) This semester gives an all-round experience of modern trends inside design industry.
3) Latest toolsets with core techniques and ample of design theory to build Brand identity, promotional branding, social media content.
4) This includes UI UX Design, Motion Graphic, infographics, Print Media, web, apps mockups and so on.

Chapter 1	Getting to Know the Work Area	2 Hours

1. Introducing Adobe Illustrator
2. Opening an Illustrator file
3. Exploring the workspace
4. Changing the view of artwork
5. Navigating multiple artboards
6. Arranging multiple documents

Chapter 2	2. Techniques for Selecting Artwork	2 Hours

1. Starting the lesson
2. Selecting objects
3. Aligning objects
4. Working with groups
5. Exploring object arrangement

Chapter 3	Using Shapes to Create Artwork	2 Hours

1. Starting the lesson
2. Creating a new document
3. Working with basic shapes
4. Using Image Trace to convert raster images into editable vector art
5. Working with drawing modes

Chapter 4	4. Editing and Combining Shapes and Paths	2 Hours

1. Starting the lesson
2. Editing paths and shapes
3. Combining shapes
4. Using the Width tool

Chapter 5	5. Transforming Artwork	2 Hours

1. Starting the lesson
2. Working with artboards
3. Working with rulers and guides
4. Transforming content

Chapter 6	6. Using the Basic Drawing Tools	4 Hours

1. Starting the lesson
2. Creating with the Curvature tool
3. Creating dashed lines
4. Drawing with the Pencil tool
5. Joining with the Join tool

6. Adding arrowheads to paths

Chapter 7	**7. Drawing with the Pen Tool**	2 Hours

1. Starting the lesson
2. Understanding curved paths
3. An introduction to drawing with the Pen tool
4. Creating artwork with the Pen tool
5. Editing paths and points

Chapter 8	**8. Using Color to Enhance Artwork**	3 Hours

1. Starting the lesson
2. Exploring color modes
3. Working with color
4. Working with Live Paint

Chapter 9	**9. Type**	4 hours

1. Starting the lesson
2. Adding type
3. Formatting type
4. Resizing and reshaping type objects
5. Creating and applying text styles
6. Wrapping text
7. Warping text
8. Working with type on a path
9. Creating text outlines

Chapter 10	**10. Organizing your Artwork with Layers**	3 hours

1. Starting the lesson
2. Creating layers and sublayers
3. Editing layers and objects
4. Creating a clipping mask
5. Painting and mixing colors with brush presets

Chapter 11	**11. Gradients, Blends, and Patterns**	2 hours

1. Starting the lesson
2. Working with gradients
3. Working with blended objects
4. Creating patterns

Chapter 12	**12. Using Brushes**	2 hours

1. Starting the lesson
2. Working with brushes
3. Using Calligraphic brushes
4. Using Art brushes
5. Using Pattern brushes
6. Using Bristle brushes
7. Working with the Blob Brush tool

Chapter 13	**13. Exploring Creative Uses of Effects and Graphic Styles**	2 hours

1. Starting the lesson
2. Using the Appearance panel
3. Using live effects
4. Applying a Photoshop effect
5. Using graphic styles

Chapter 14	**14. Creating Artwork for a T-Shirt**	2 hours

1. Starting the lesson
2. Working with symbols
3. Working with Creative Cloud libraries
4. Working with global editing

Chapter 15	**15. Placing and Working with Images**	2 hours

1. Starting the lesson
2. Combining artwork
3. Placing image files
4. Masking images
5. Working with image links

Chapter 16	**16. Sharing Projects**	2 hours

1. Starting the lesson
2. Packaging a file
3. Creating a PDF
4. Creating pixel-perfect drawings
5. Exporting artboards and assets

Reference books

- **Illustrator Classroom in a Book**

Digital Design I – Adobe InDesign

Objective

1) Learn design aspects and able to explore the emerging needs and technology for a good design.
2) To learn how to write for print and web color models
3) Students must be able to manipulate type to convey precisely what's intended and demonstrating the impact importance of good typography.

Outcome

1) Students will be able understand and design the industry requirement for digital design.
2) This semester gives an all-round experience of modern trends inside design industry.
3) Latest toolsets with core techniques and ample of design theory to build Brand identity, promotional branding, social media content.
4) This includes UI UX Design, Motion Graphic, infographics, Print Media, web, apps mockups and so on.

Chapter 1	Getting to Know the Work Area	2 Hours

1. Introducing the Workspace
2. Getting started
3. Looking at the workspace
4. Working with panels
5. Customizing the workspace
6. Changing the magnification of a document
7. Navigating through a document
8. Using context menus
9. Using panel menus
10. Modifying interface preferences
11. Exploring on your own

Chapter 2	2. Getting to Know InDesign	2 Hours

1. Getting started
2. Viewing guides
3. Adding text
4. Working with styles
5. Working with graphics
6. Working with objects
7. Working with object styles
8. Preflighting as you work
9. Viewing the document in Presentation mode
10. Exploring on your own

Chapter 3	3. Setting Up a Document and Working with Pages	2 Hours

1. Getting started
2. Creating a new document
3. Creating and saving custom document settings
4. Creating a new document from a preset
5. Working with master pages
6. Applying master pages to document pages
7. Adding new document pages
8. Rearranging and deleting document pages
9. Changing the size of pages within one InDesign document
10. Adding sections to change page numbering
11. Overriding master page items and placing text and graphics
12. Printing to the edge of the paper: Using the bleed guides
13. Viewing the completed spread
14. Exploring on your own

Chapter 4	4. Working with Objects	2 Hours

1. Getting started

2. Introducing layers
3. Working with layers
4. Creating and modifying text frames
5. Creating and modifying graphics frames
6. Adding metadata captions to graphics frames
7. Wrapping text around a graphic
8. Transforming the shape of frames
9. Transforming and aligning objects
10. Selecting and modifying grouped objects
11. Flowing type along a path
12. Drawing lines and modifying arrowheads
13. Finishing up
14. Exploring on your own

Chapter 5	5. Working with Color	2 Hours

1. Getting started
2. Managing color
3. Defining printing requirements
4. Creating colors
5. Applying colors
6. Working with tint swatches
7. Working with gradients
8. Working with color groups
9. Exploring on your own

Chapter 6	6. Flowing Text	4 Hours

1. Getting started
2. Flowing text into an existing frame
3. Flowing text manually
4. Creating text frames while flowing text
5. Creating threaded frames automatically
6. Flowing text automatically
7. Using Find/Change to delete extra paragraph returns
8. Applying paragraph styles to text
9. Adjusting columns
10. Using the baseline grid to align text
11. Adding a jump line page number
12. Exploring on your own

Chapter 7	7. Editing Text	2 Hours

1. Getting started
2. Entering and importing text
3. Finding and changing text and formatting
4. Checking spelling
5. Editing text by dragging and dropping
6. Using the Story Editor
7. Tracking changes
8. Exploring on your own

Chapter 8	8. Working with Typography	3 Hours

1. Getting started
2. Adjusting vertical spacing

3. Working with fonts, type styles, and glyphs
4. Working with columns
5. Changing paragraph alignment
6. Creating a drop cap
7. Adjusting letter and word spacing
8. Adjusting line breaks
9. Setting tabs
10. Working with paragraph shading and rules

Chapter 9	9. Working with Styles	4 hours

1. Getting started
2. Creating and applying paragraph styles
3. Creating and applying character styles
4. Nesting character styles inside paragraph styles
5. Creating and applying object styles
6. Creating and applying table and cell styles
7. Globally updating styles
8. Loading styles from another document
9. Exploring on your own

Chapter 10	10. Creating Tables	3 hours

1. Getting started
2. Working with tables
3. Converting text to a table
4. Changing rows and columns
5. Formatting a table
6. Adding graphics to table cells
7. Creating a header row
8. Creating and applying table and cell styles
9. Exploring on your own

Chapter 11	11. Importing and Modifying Graphics	2 hours

1. Getting started
2. Adding graphics from other programs
3. Comparing vector and bitmap graphics
4. Managing links to imported files
5. Updating revised graphics
6. Adjusting display quality
7. Importing and sizing graphics
8. Editing placed pictures
9. Working with dropped backgrounds
10. Importing native Adobe graphic files
11. Using subject-aware text wrap
12. Filling type with a graphic
13. Using an InDesign library to manage objects
14. Exploring on your own

Chapter 12	12. working with transparency	2 hours

1. Getting started
2. Creating a background graphic
3. Applying transparency settings
4. Adding transparency effects to imported vector and bitmap graphics

5. Importing and adjusting Illustrator files that use transparency
6. Applying transparency settings to text
7. Working with effects
8. Exploring on your own

Chapter 13	13. Printing and Exporting	2 hours

1. Getting started
2. Preflighting files
3. Previewing separations
4. Managing colors
5. Previewing transparency effects
6. Previewing the pages
7. Creating an Adobe PDF proof
8. Creating a press-ready PDF and saving a PDF preset
9. Printing a proof and saving a print preset
10. Packaging files
11. Exporting graphics for the web and other digital destinations
12. Exploring on your own

Chapter 14	14. Creating Adobe PDF Files with Form Fields	2 hours

1. Getting started
2. Setting up a workspace for forms
3. Adding form fields
4. Setting the tab order of the fields
5. Adding a button to submit the form
6. Exporting an interactive Adobe PDF file
7. Testing your form in Acrobat Reader
8. Exploring on your own

Chapter 15	15. Creating a Fixed-Layout Epub	2 hours

1. Getting started
2. Creating a new document for fixed-layout export

3. EPUB: Fixed-layout versus reflowable
4. Adding animation
5. Buttons
6. Adding multimedia and interactive elements
7. Exporting a fixed-layout EPUB file
8. InDesign Publish Online
9. Exploring on your own

Reference books

- How Do I Do That in InDesign? Dave Clayton, Scott Kelby
- InDesign Classroom in a Book
- Adobe InDesign 2020 By Against the Clock

Course Type: Core Credit Course Code: BV105

Paper-3: Motion Graphics – Adobe After Effect

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1) To fulfill the needs of social media for creation of motion graphics and dynamic media.
2) Creating E-learning content on the fly with the proper toolsets.
3) On demand workflows of media industry for crating content.

Outcome

1) Students will be able to create dynamic content and concept-based designs.
2) Students can create a concept-based design as per the subject and theme.

Chapter 1	1. Getting to Know the Workflow	2 Hours

1. Getting started
2. Creating a project and importing footage
3. Creating a composition and arranging layers
4. Adding effects and modifying layer properties
5. Animating the composition
6. Previewing your work
7. Optimizing performance in After Effects
8. Rendering and exporting your composition
9. Customizing workspaces
10. Controlling the brightness of the user interface
11. Collaborating in After Effects
12. Finding resources for using After Effects

Chapter 2	2. Creating a Basic Animation Using Effects and Presets	2 Hours

1. Getting started

2. Importing footage using Adobe Bridge
3. Creating a new composition
4. Working with imported Illustrator layers
5. Applying effects to a layer
6. Applying an animation preset
7. Recomposing layers for a new animation
8. Previewing the effects
9. Adding transparency
10. Rendering the composition

Chapter 3	**3. Animating Text**	2 Hours

1. Getting started
2. About text layers
3. Installing a font using Adobe Fonts
4. Creating and formatting point text
5. Animating with scale keyframes
6. Using a text animation preset
7. Animating imported Photoshop text
8. Animating type tracking
9. Animating text opacity
10. Animating an image to replace text
11. Using a text animator group
12. Animating a layer's position
13. Adding motion blur

Chapter 4	**4. Working with Shape Layers**	2 Hours

1. Getting started
2. Creating the composition
3. Adding a shape layer
4. Creating a self-animating shape
5. Duplicating a shape
6. Creating custom shapes with the Pen tool
7. Positioning layers with snapping
8. Animating a shape
9. Animating using parenting
10. Using nulls to connect points
11. Previewing the composition

Chapter 5	**5. Animating a Multimedia Presentation**	2 Hours

1. Getting started
2. Adjusting anchor points
3. Parenting layers
4. Precomposing layers
5. Keyframing a motion path
6. Animating additional elements
7. Applying an effect
8. Animating precomposed layers
9. Animating the background
10. Adding an audio track

Chapter 6	**6. Animating Layers**	4 Hours

1. Getting started
2. Simulating lighting changes
3. Duplicating an animation using the pick whip
4. Using a track matte to confine animation
5. Animating using the Corner Pin effect
6. Simulating a darkening sky
7. Retiming the composition

Chapter 7	**7. Working with Masks**	2 Hours

1. About masks
2. Getting started
3. Creating a mask with the Pen tool
4. Editing a mask
5. Feathering the edges of a mask
6. Replacing the content of the mask
7. Adjusting the opacity
8. Adding a shadow
9. Creating a vignette

Chapter 8	8. Distorting Objects with the Puppet Tools	3 Hours

1. Getting started
2. About the Puppet tools
3. Adding Position pins
4. Adding Advanced and Bend pins
5. Stiffening an area
6. Animating pin positions
7. Using the Puppet tools to animate video
8. Recording animation

Chapter 9	9. Using the Roto Brush Tool	4 hours

1. About rotoscoping
2. Getting started
3. Creating a segmentation boundary
4. Fine-tuning the matte
5. Freezing your Roto Brush tool results
6. Changing the background
7. Adding animated text
8. Outputting your project

Chapter 10	10. Performing Color Correction	3 hours

1. Getting started
2. Adjusting color balance with levels
3. Adjusting color with the Lumetri Color effect
4. Replacing the background
5. Color-correcting using Auto Levels
6. Motion tracking the clouds
7. Replacing the sky in the second clip
8. Color grading

Chapter 11	11. Creating Motion Graphics Templates	2 hours

1. Getting started
2. Preparing a master composition
3. Setting up a template
4. Adding properties to the Essential Graphics panel
5. Providing image options
6. Protecting the timing of a section
7. Exporting the template

Chapter 12	12. Using 3D Features	2 hours

1. Getting started
2. Creating 3D layers
3. Animating 3D layers
4. Adding ambient light
5. Recomposing layers
6. Creating 3D text
7. Using 3D views
8. Adding a camera
9. Lighting a scene

Chapter 13	13. Working with the 3D Camera Tracker	2 hours

1. About the 3D Camera Tracker effect
2. Getting started
3. Tracking the footage
4. Creating a ground plane, a camera, and the initial text
5. Creating additional text elements
6. Locking an image to a plane with a solid layer
7. Tidying the composition
8. Adding a final object
9. Creating realistic shadows
10. Adding ambient light
11. Adding an effect
12. Previewing the composition

Chapter 14	14. Advanced Editing Techniques	2 hours

1. Getting started
2. Stabilizing a shot
3. Using single-point motion tracking
4. Removing unwanted objects
5. Creating a particle simulation
6. Retiming playback using the Time warp effect

Chapter 15	15. Rendering and Outputting	2 hours

1. Getting started
2. About rendering and output
3. Exporting using the Render Queue
4. Creating templates for the Render Queue
5. Rendering movies with Adobe Media Encoder

Reference books

- Adobe After Effect Classroom in a Book

Sem 2 – Film Making **FY B.Voc**

Course Type: Core Credit Course Code: BVOC 107

Paper - 1: **Photography Fundamentals**

Guidelines: **Practical's/Assessment/Presentations**

Practical's: Faculty has to take Daily practical of 1 hour each for 30 days.
Presentations: In class/Lab/projector-based presentations along with the submission of the PPT file.
Software Assignments: Student has to submit Master file along with the Jpg version of the same file (1920X1080).
For e.g. A *.**psd** File for **photoshop** assessment along with its **jpg.**
Images/Photography: All video submission should be 1920X1080 for the respective subject.
Videos: All video submission should be 1920X1080 for the respective subject.
Renders: All Rendered submissions should be 1920X1080 for the respective subject.
Naming conventions: File Naming should be in given format for all type of assignments.

College_Year_Studentname_subject_Assesmentname.Ext
E.g. APC_FYBvoc2021_VikasJadhav_Illustrator_LogoDesign.Jpg

Drawings: The Drawing assignments are to be submitted by the student in the form of a journal/file containing individual assignment sheets. Each assignment includes the Assignment Title, Problem statement, Date of submission, Assessment date, Assessment grade and instructor's sign.

BVOC 104	Digital Design Assessment's	Paper- 4 Credits 6

Assessment 1: Retouching old photographs
Assessment 2: Create simple artwork by using basic shapes and layers
Assessment 3: Masking assignments, layer, vector, clip.
Assessment 4: Image Background cutting/Clipping
Assessment 5: Create 5 logos on given concepts by faculty.
Assessment 6: Digital Painting
Assessment 7: Matte Painting
Assessment 8: Creating advertisement layouts for concept given by faculty.
Assessment 9: Creating illustration (characters, symbols, 2d backgrounds)
Assessment10: Multipage document magazine/book.
Assessment11: Advertisement layout design InDesign.

Assessment 1: Presentation on Multimedia and Computer Graphics along with PPt File.
Assessment 2: Presentation on Typography and Corporate Identity along with PPt File.
Assessment 3: Presentation on Principles of Design and Concept of Advertisement along with PPt File.
Assessment 4: Compose paper drawings for 5 concept advertisements.
Assessment 5: paper drawings for 5 concept Typography.
Assessment 6: Develop 5 paper drawings for concept logos.

BVOC 105	Creating social Media infographics Video content	Paper- 5 Credits 6

Assessment 1: Basic Motion Graphic importing adobe illustrator file.
Assessment 2: Puppet tool animation
Assessment 3: Multimedia Presentation using pick whips, track mattes, motion blurs
Assessment 4: Creating 3d compositions with lights.
Assessment 5: Basic rotoscopy practices
Assessment 6: Creating 3d matte paint
Assessment 7: Creating Motion Graphics using effects.
Assessment 7: 2d 3d element's Compositing Practices.

BVOC 106	Hands on Training on 2 skill Specialization	Paper- 6Credits 6

Assessment 1: Product branding project with production standards. Includes print, web, social media and motion graphics for the brand.

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1) To create creative artist for creative content with technical abilities.
2) To capture the phase of wild spreading industry of video content.
3) Practicing the base of film making to produce best of entertainment by pitching the right preproduction management.

Outcome

1) This semester focuses on film production process and literacy of pipeline for live action films.
2) This will teach from concept visualization, storyboards, screenplays, animatics.
3) Student will be able to plan his own short film and understand the entire process of film making. Photography will be an addition to make students more eligible for jobs and their own small-scale business.

Chapter 1	Chapter 1: Getting Started with Photography	8 Hours

1.1. Getting Started with Photography
1.2. Compact Digital Cameras
1.3. Advanced Digital Cameras
1.4. DSLR and SLR
Digital Photography vs. Film

Chapter 2	The Different Elements Of Photography	8 Hours

2.1. Line -– Can be vertical, horizontal, curved or jagged. Examples: roads, sunsets, bridges.
2.2. Shape -– Two-dimensional representation of objects. Examples: silhouetted photographs of birds.
2.3. Form – Three-dimensional representation of objects, usually through the use of lighting and shadows.
2.4. Texture – The use of lighting to bring out details of an object, making it easy to see whether a surface is smooth or soft.
2.5. Pattern – The use of repetition to create an interesting photo. Examples: photos of gardens or flowers.
2.6. Color – Using warm or cool colors to set a mood.
2.7. Space – Either negative or positive space can be used to make a statement. Often seen when using the rule of thirds. Bit depth

Chapter 3	Proper Lighting and Your Options	8 Hours

6.1. The farther the source, the harder the light
6.2. Diffusion scatters light
6.3. Bouncing light acts as diffusion
6.4. The farther the light source, the more it falls off
6.5. Light falloff
6.6. Front lighting de-emphasizes texture
6.7. Shadows and volume
6.8. Backlight
6.9. The exposure triangle

Reference books
➢ Understanding Exposure by Bryan Peterson ➢ Understanding Exposure by Bryan Peterson ➢ DSLR Photography for Beginners: Take 10 Times Better Pictures in 48 Hours or Less by Brian Black

Sem 2 – Film Making FY B.Voc

Course Type: Core Credit Course Code: BVOC 108

Paper-2: Cinematography Fundamentals

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50Marks UE: 50 Marks

Objective

1) To create creative artist for creative content with technical abilities.
2) To capture the phase of wild spreading industry of video content.

Practicing the base of film making to produce best of entertainment by pitching the right preproduction management.

Outcome

1) This semester focuses on film production process and literacy of pipeline for live action films.
2) This will teach from concept visualization, storyboards, screenplays, animatics.
3) Student will be able to plan his own short film and understand the entire process of film making. Photography will be an addition to make students more eligible for jobs and their own small-scale business.

Chapter 1	Cameras & sensors	2 Hours

1. The Digital Signal Path
2. Digital Signal Processor
3. HD, HD+ AND UHD
4. HD Recording
5. Post High-def
6. Raw Vs. Baked in
7. RAW Camera Signal Path
8. Viewing Stream
9. Definitions
10. Digital Negative
11. Chroma Subsampling
12. Pixels

13. Resolution
14. Photo sites
15. Pixels and Photo sites Are Not the same Thing!
16. Digitizing
17. Olpf
18. Digital Sensors
19. CCD
20. CMOS
21. Other Types of Sensors
22. 3-Chip
23. Making Color from Black-and-White
24. Bayer Filter
25. Demosaicing/DeBayering
26. Color Interpolation
27. What Color Is Your Sensor?
28. How Many Pixels is Enough?
29. 5K for 4K
30. Shutters
31. Spinning Mirror
32. Rolling Shutter and Global Shutter
33. Sensor Size and Depth-of-Field
34. ISO in Digital Cameras
35. Noise
36. IR and Hot Mirror Filters
37. Bit Rate
38. Bit Depth
39. Frame Rates
40. The Film Look vs. the Video Look
41. Film Cameras

Chapter 2	**Measurement**	2 Hours

1. The Waveform Monitor
2. External Sync
3. Types of Display
4. Color Bars in Detail
5. Using the PLUGE in Monitor Calibration
6. Monitor Probes
7. Legal and Valid
8. Hue/Phase
9. The Vectorscope
10. Using the Vectorscope on the Set
11. Color Bars on the Vectorscope
12. White Balance/Black Balance
13. Gamut
14. Video Test Cards
15. The Deceptively simple Neutral Gray Card
16. The Gray Card and Color Balance in Film and Video
17. Why Isn't 18% Gray Also 50%?
18. Calibration Test Charts
19. DSC Labs Test Charts
20. The One Shot
21. The X-Rite Color Checker
22. Chroma Match & screen Align
23. Skin Tone
24. Measuring Image Resolution

Chapter 3	**Exposure**	4 Hours

1. Exposure Theory
2. What Do We Want Exposure to Do for Us?
3. Controlling Exposure
4. Change the Bucket
5. The Elements of Exposure
6. Light
7. F/Stops
8. Shutter Speed/Frame Rate/Shutter Angle
9. The Response Curve
10. Underexposure
11. Overexposure
12. Correct Exposure
13. Higher Brightness Range in the Scene
14. Two Types of Exposure
15. How Film and Video Are Different
16. We'll Fix It in Post
17. The Bottom Line
18. Exposure in shooting RAW Video
19. Video Exposure
20. The Tools of Exposure
21. The Incident Meter
22. The Reflectance Meter
23. A Different World of Exposure
24. Setting Exposure with the Waveform Monitor
25. F/Stops on the Waveform
26. The 18% Solution
27. Exposure Indicators in the Camera
28. Zebras
29. Histogram
30. Traffic Lights and Goal Posts
31. False Color Exposure Display
32. Arri Alexa False Colors
33. Strategies of Exposure
34. Don't Let It Clip, but Avoid the Noise

35. Texture & Detail
36. The Dilemma
37. Using Light Meters
38. Meter the Key
39. Using the Waveform Monitor
40. Placing Middle Gray
41. Start at the Bottom or Start at the Top
42. Expose to the Right
43. Zebras
44. The Monitor
45. Know Thyself and Know Thy Camera
46. Blackmagic Camera Exposure Advice
47. HDRX

Chapter 4	**Linear, gamma, log**	4 Hours

1. Dynamic Range
2. Linear Response
3. An Ideal and a Problem
4. Linear as Scene Referred

5. The Classic S-Curve in the Image
6. Film Gamma and Video Gamma
7. Video Gamma
8. The Coincidence
9. Rec. 709
10. Studio Swing Levels, Full Range, and Legal Video
11. Gamma Control In Traditional HD
12. Knee Control
13. Black Stretch/Black Gamma
14. Another Approach
15. Hypergamma/Cinegamma/Film Rec
16. Sony Hypergamma terminology
17. Gamma in RAW Video
18. The Inefficiency of Linear
19. Log Encoding
20. Superwhite
21. What You See Is Not What You Get
22. Log and RAW—Two Different Things
23. Proprietary Log Curves
24. Sony S-Log
25. Arri Log C
26. Canon-Log
27. Redcode
28. Red Log
29. 18% Gray in Log
30. Variation in Log Curves

Chapter 5	Image control & grading	4 Hours

1. At the Dit Cart
2. What Happens at the Cart Doesn't Stay at the Cart
3. Color Correction and Color Grading
4. Controllers and Control Surfaces
5. Control Parameters
6. Lift/Shadows
7. Gamma/Midtones
8. Gain/Highlights
9. Curves
10. Log Controls
11. Log Offset Color and Master Controls
12. Exporting and Reusing Grades
13. Luts and Looks
14. LUT Formats
15. Proper Use of LUTs in Color Correction
16. Viewing Luts
17. LUTs and Looks: What's the Difference?
18. Controlling the Image in Front of the Lens
19. Camera Filter Types
20. Diffusion and Effects Filters
21. Contrast Filters
22. Neutral Density Filters
23. Effects Filters and Grads
24. Converse Filters
25. Camera Lens Filters for Color Correction
26. Warming and Cooling Filters
27. Contrast Control in Black-And-White
28. Polarizers

29. IR Filters

Chapter 6	The tools of lighting	4 Hours

1. Color Balance
2. Color Rendering Index
3. Daylight/Tungsten Sources
4. LED Lights
5. Remote Phosphor LEDs
6. HMI Units
7. Xenons
8. Tungsten Lights
9. Fresnels
10. Open Face
11. Pars
12. Soft Lights
13. Barger Baglights
14. Color-Correct Fluorescents
15. Other Types of Units
16. Softsun
17. Cycs, Strips, Nooks, and Broads
18. Chinese Lanterns and Spacelights
19. Self-Contained Crane Rigs
20. Ellipsoidal Reflector Spots
21. Balloon Lights
22. Handheld Units
23. Day Exteriors
24. Controlling Light with Grip Equipment

Chapter 7	Lighting basics	6 Hours

1. The Fundamentals of Lighting
2. The [Conceptual] Tools of Lighting
3. The Attributes of Light
4. Hard vs. Soft

5. Full Range of Tones
6. Color Control and Color Balance
7. Shape
8. Separation
9. Depth
10. Texture
11. Mood and Tone
12. Exposure and Lighting
13. Some Lighting Terminology
14. Working with Hard Light and Soft Light
15. Hard Light
16. Soft Light
17. Direction
18. Avoiding Flat Front Lighting
19. Light from the Upstage Side
20. Backlight and Kicker
21. Intensity
22. Texture in Lighting
23. Color
24. Lighting Techniques
25. Ambient

26. Classical Lighting
27. Bringing it through the Windows
28. Practicals and Motivated Lighting
29. Basic Principles of Lighting
30. Back Cross Keys
31. Ambient Plus Accents
32. Lighting with Practicals
33. Lighting through the Window
34. Available Natural Light
35. Available Light Windows
36. Motivated Light
37. Carrying a Lamp
38. Day Exteriors
39. Fill
40. Silks and Diffusion
41. Open Shade and Garage Door Light
42. Sun As Backlight
43. Magic Hour

Chapter 8	Optics & focus	2 Hours

1. The Physical Basis of Optics
2. Refraction
3. Focal Length and Angle of View
4. F/Stop
5. Focus
6. Mental Focus
7. Circle of Confusion
8. Depth-of-Field
9. How Not to Get More Depth-of-Field
10. Hyperfocal Distance
11. Nodal Points
12. The Rear Nodal Point and Special Effects Shots
13. Zooms and Depth-of-Field
14. Macrophotography
15. Exposure Compensation in Macrophotography

16. Depth-of-Field in Close-Up Work
17. Calculating Depth-of-Field in Close-Up Work
18. Close-Up Tools
19. Diopters
20. Extension Tubes or Bellows
21. Macro Lenses
22. Snorkels and Innovision
23. Specialized Lenses
24. Lens Extenders and Filter Factors
25. Lens Care
26. Back Focus

Chapter 9	Camera movement	4 hours

1. Camera Movement in Filmmaking
2. Motivation and Invisible Technique
3. Basic Technique
4. Types of Moves
5. Pan
6. Tilt

7. Move In/Move Out
8. Zoom
9. Punch-in
10. Moving Shots
11. Tracking
12. Countermove
13. Reveal with Movement
14. Circle Track Moves
15. Crane Moves
16. Rolling shot
17. Camera Supports for Movement
18. Drones
19. Handheld
20. Stabilizer Rigs
21. Camera Heads
22. The Tripod
23. High-Hat
24. Rocker Plate
25. Tilt Plate
26. The Crab Dolly
27. Dolly Terminology
28. Car Shots
29. Camera Positions for Car Shots
30. Vehicle to Vehicle Shooting
31. Aerial Shots
32. Other Types of Camera Mounts
33. Steadicam
34. Rickshaw, Wheelchair, and Garfield
35. Cable-Cam
36. Crash Cams
37. Splash Boxes
38. Underwater Housings
39. Motion Control

Chapter 10	Set operations	2 hours

1. Making It Happen
2. The Director of Photography
3. The Cinematographer's Tools
4. Gaffer Glass
5. Laser Pointer
6. Director's Viewfinder
7. Digital Still Camera
8. The Shot List
9. Putting the Order Together
10. Reading the Script
11. Talking to the Director
12. Location Scouts and Tech Scouts
13. Coordinating with Other Departments
14. The Team and the Order
15. The Page Turn
16. Tests
17. Camera Crew
18. Operator
19. First AC Duties
20. Second AC
21. Loader

22. DIT
23. DIT Workflow
24. Simple Data Workflow
25. Advanced Workflow
26. Digital Loader/Media Manager
27. Utility
28. Camera Crew Reports, Equipment & Tools
29. Camera Reports
30. Camera Assistant Tools and Supplies
31. AC Prep
32. Camera Prep Checklist
33. The Team
34. Lighting Technicians (Electricians or Sparks)
35. Grips
36. Other Units
37. Set Procedures
38. Block, Light, Rehearse, Shoot
39. The Process
40. Room Tone
41. Set Etiquette
42. Set Safety
43. Lighting, Electrical, and Grip
44. Crane Safety
45. Slating Technique
46. Verbal Slating
47. Tail Slate
48. MOS Slating
49. Slating Multiple Cameras
50. Timecode Slates
51. Jamming the Slate
52. What to Write on the Slate
53. When to Change the Letter
54. The European System of Slating
55. Pickups, Series, and Reshoots
56. VFX
57. Bumping a Slate

58. Insert Slates
59. Finding the Sun

Chapter 11	**Data management**	2 hours

1. Basic Principles
2. Cover your Rear
3. Standard Procedures
4. Maintain Your Logs
5. Procedure—Best Practices
6. Locked and Loaded
7. Get Your Signals Straight
8. Always Scrub
9. Three Drives
10. Do Nor Drag and Drop
11. Logs
12. File Management
13. File Naming
14. Download/Ingest Software
15. ShotPut Pro
16. Silverstack

17. Double Data
18. Proprietary Data Management Software
19. External Recorders
20. Hard Drives & Raids
21. RAID
22. Transfer/Shuttle Drives
23. How Much Storage Do You Need?

Reference books

- Cinematography: Theory and Practice, 2nd Edition by Blain Brown
- The Filmmaker's Eye by Gustavo Mercado
- Cinematography: Theory and Practice, 2nd Edition by Blain Brown
- Painting with Light by JOHN ALTON

Sem 2 – Film Making **FY B.Voc**

Course Type: Core Credit Course Code: BVOC 109

Paper-3: Audio Video Editing - Adobe Audition, Premier

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1. To create creative artist for creative content with technical abilities.
2. To capture the phase of wild spreading industry of video content.
3. Practicing the base of film making to produce best of entertainment by pitching the right preproduction management.

Outcome

1. This semester focuses on film production process and literacy of pipeline for live action films.
2. This will teach from concept visualization, storyboards, screenplays, animatics.
3. Student will be able to plan his own short film and understand the entire process of film making. Photography will be an addition to make students more eligible for jobs and their own small-scale business.

Chapter 1	**The audition interface and** waveform editing	2 Hours

1. Introducing the the interface
2. Open a file Video files Select regions
3. Cut, Copy, and Paste
4. Use multiple clipboards
5. Mix paste Create a loop
6. Showing waveform data under the cursor Add fades

Chapter 2	EFFECTS	6 Hours

11. Effects basics
12. Using the Effects Rack Effect categories
13. Amplitude and Compression effects
14. Delay and echo effects Filter and EQ effects Modulation effects
15. Noise reduction/restoration
16. Reverb effects
17. Special effects
18. Stereo imagery effects
19. Time and Pitch effects Third-party effects (VST and AU) Using the Effects menu
20. Presets and favorites

Chapter 3	Audio restoration	6 Hours

15. Getting started
16. Creating a new document
17. Creating and saving custom document settings
18. Creating a new document from a preset
19. Working with master pages
20. Applying master pages to document pages
21. Adding new document pages
22. Rearranging and deleting document pages
23. Changing the size of pages within one InDesign document
24. Adding sections to change page numbering
25. Overriding master page items and placing text and graphics
26. Printing to the edge of the paper: Using the bleed guides
27. Viewing the completed spread
28. Exploring on your own

Chapter 4	Mastering	4 Hours

1. Mastering basics equalization
2. Dynamics
3. Ambience
4. Stereo imaging
5. Push the drum hits; then apply the changes mastering diagnostics

Chapter 5	Sound design	2 Hours

1. About sound design
2. Generate noise, speech, and tones creating rain sounds
3. Creating a babbling brook
4. Creating insects at night
5. Creating an alien choir
6. Creating sci-fi machine effects creating an alien drone flyby extracting frequency bands

Chapter 6	Creating and recording files	2 Hours

1. Recording into the waveform editor
2. Recording into the multitrack editor
3. Checking remaining free space
4. Dragging into an audition editor
5. Importing tracks as individual files from an audio cd

Chapter 7	Multitrack sessions	6 Hours

1. About multitrack production create a multitrack session multitrack session template
2. Multitrack and waveform editor integration
3. Changing track colors
4. The tracks panel
5. Loop selections for playback
6. Track controls
7. Channel mapping in the multitrack editor the multitrack editor effects rack
8. Create a mixtape
9. Mixing or exporting a collection of clips as a single file merge clips into a single file
10. Editing clip length
11. Clip edits: split, trim, volume
12. Extend a clip via looping
13. Remix

Chapter 8	Automation	4 Hours

1. About automation clip automation track automation
2. Video soundtracks
3. Multitrack session video
4. Audition integration with adobe premiere pro cc automatic speech alignment
5. Automating tasks
6. Assigning audio types
7. Essential sound panel presets
8. The multitrack mixer audio mixer basics
9. Creating music with sound libraries
10. About sound libraries Download Adobe sound effects
11. Preparing
12. Building a rhythm track Adding more percussion Adding melodic elements Using loops with different pitch and tempo
13. Adding effects

Chapter 9	Recording and output in the multitrack editor	4 hours

1. Setting up the metronome
2. File management
3. Recording a part in a track
4. Recording an additional part (overdub)
5. Punching over a mistake
6. Composite recording
7. Exporting a stereo mix of the song Exporting with Adobe Media Encoder

Reference books

- PC Audio Editing with Adobe Audition by Roger
- Adobe Audition 2020: Learning the Fundamentals
- Adobe Audition CC Classroom in a Book

Adobe Premier Pro

Objective

1. To create creative artist for creative content with technical abilities.
2. To capture the phase of wild spreading industry of video content.
3. Practicing the base of film making to produce best of entertainment by pitching the right preproduction management.

Outcome

1. This semester focuses on film production process and literacy of pipeline for live action films.
2. This will teach from concept visualization, storyboards, screenplays, animatics.
3. Student will be able to plan his own short film and understand the entire process of film making. Photography will be an addition to make students more eligible for jobs and their own small-scale business.

Chapter 1	Getting to Know the Workflow	2 Hours

1. Starting the lesson
2. Performing nonlinear editing in Premiere Pro Expanding the workflow
3. Touring the Premiere Pro interface
4. Hands on: Edit your first video
5. Using and setting keyboard shortcuts

Chapter 2	Setting up a project importing organizing media	2 Hours

11. Importing media files
12. Working with ingest options and proxy media
13. Working with the Media Browser panel Importing still Image files
14. Using Adobe Stock Customizing the media cache
15. Recording a voice-over
16. Using the Project panel
17. Working with bins Reviewing footage Freeform view
18. Modifying clips

Chapter 3	MASTERING THE ESSENTIALS OF VIDEO EDITING	2 Hours

1. Using the Source Monitor
2. Navigating the Timeline panel

3. Using essential editing commands
4. Performing storyboard-style editing

Chapter 4	WORKING WITH CLIPS AND MARKERS	2 Hours

1. Using the Program Monitor controls Setting the playback resolution Playing back VR video
2. Using markers
3. Using Sync Lock and Track Lock Finding gaps in the sequence
4. Selecting clips
5. Moving clips
6. Extracting and deleting segments

Chapter 5	ADDING TRANSITIONS	2 Hours

1. What are transitions? Using handles
2. Adding video transitions
3. Using A/R mode to fine-tune a transition Adding audio transitions

Chapter 6	MASTERING ADVANCED EDITING TECHNIQUES	4 Hours

1. Performing a four-point edit
2. Changing clip playback speed Replacing clips and media Nesting sequences
3. Performing regular trimming
4. Performing advanced trimming
5. Trimming in the Program Monitor

Chapter 7	PUTTING ClIPS IN MOTION	2 Hours

1. Adjusting the Motion effect
2. Changing clip position, size, and rotation
3. Working with keyframe interpolation Applying the Auto Reframe effect
4. Adding a drop shadow

Chapter 8	EDITING AND MIXING AUDIO	3 Hours

1. Setting up the interface to work with audio Examining audio characteristics
2. Recording a voice-over track
3. Adjusting audio volume
4. Auto-duck music Creating a split edit
5. Adjusting audio levels for a clip
6. II IMPROVING AUDIO Starting the lesson
7. Improving audio with the Essential Sound panel Adjusting dialogue audio

Chapter 9	ADDING VIDEO EFFECTS	4 hours

1. Working with visual effects
2. Applying master clip effects
3. Masking and tracking visual effects
4. Keyframing effects Using effect presets Exploring frequently used effects
5. Using the Render and Replace command

Chapter 10	APPLYING COLOR CORRECTION AND GRADING	3 hours

1. Understanding display color management Following the color adjustment workflow
2. Using Comparison view Matching colors
3. Exploring the color-adjustment effects
4. Fixing exposure problems
5. Correcting color offset
6. Using special color effects
7. Creating a distinctive look

Chapter 11	EXPLORING COMPOSITING TECHNIQUES	2 hours

1. what Is an alpha channel?
2. Making compositing part of your project
3. Working with the Opacity effect
4. Adjusting alpha channel
5. transparencies
6. Color keying a greenscreen shot
7. Partially masking clips

Chapter 12	CREATING NEW GRAPHICS	2 hours

1. Exploring the Essential Graphics panel
2. Mastering video typography essentials
3. Creating new titles
4. Text styles
5. Working with shapes and logos
6. Making a title roll
7. Working with motion graphics templates Adding captions

Chapter 13	EXPORTING FRAMES, Clips, AND SEQUENCES	2 hours

1. Understanding the media export options Exporting single frames
2. Exporting a master copy
3. Working with Adobe Media Encoder Uploading to social media
4. Exchanging with other editing applications Final practice

Reference books

- Mastering Adobe Premiere Pro by Paul
- Adobe Premiere Pro for Dummies by Keith
- Adobe Premier Classroom in a Book by adobe

Course Type: Core Credit Course Code: BVOC 113

Paper-1: Preproduction

Teaching Scheme	No. of Credits	Examination Scheme
3 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Guidelines: **Practical's/Assessment/Presentations**

Practical's: Faculty has to take Daily practical of 1 hour each for 30 days.
Presentations: In class/Lab/projector-based presentations along with the submission of the PPT file.
Software Assignments: Student has to submit Master file along with the Jpg version of the same file (1920X1080).
For e.g. A *.**psd** File for **photoshop** assessment along with its **jpg.**
Images/Photography: All Image submission should be 1920X1080 for the respective subject. Photography and digital film making can have 4k or 4k+ resolution.
Videos: All video submission should be 1920X1080 for the respective subject.
Renders: All Rendered submissions should be 1920X1080 for the respective subject.
Naming conventions: File Naming should be in given format for all type of assignments.

College_Year_Studentname_subject_Assesmentname.Ext
E.g. APC_FYBvoc2021_VikasJadhav_Illustrator_LogoDesign.Jpg

Drawings: The Drawing assignments are to be submitted by the student in the form of a journal/file containing individual assignment sheets. Each assignment includes the Assignment Title, Problem statement, Date of submission, Assessment date, Assessment grade and instructor's sign.

BVOC 110	Outdoor/Product Based Photography	Paper- 4 Credits 6

Assessment 1: An Outdoor/indoor Shoot for 5 different Themes.
Assessment 1: Lighting studies
Assessment 1: Dof, Focus study
Assessment 1: Macro Micro Photography

BVOC 111	Creating a Live action Short film	Paper- 5 Credits 6

Assessment 1: Creating storyboards.
Assessment 2: Create a concept Based Short Film/commercial advertisement.

- Keep short less than 4 mins.
- Tell the story.
- Engage audience.
- Find Moments.

Assessment 3: Create a breakdown/behind the scenes video with documentation of you film. Such as script, storyboard screenplay. Create a PowerPoint presentation and present it in the class to describe all.

BVOC 112	Hands on Training (Project – Film Making)	Paper- 6 Credits 6

Assessment 1: Create a short film in groups with commercial standard on a given concept.

Objective

1) To understand, explore and learn the art of pencil drawing. To learn the toning and shading of different grade of professional sketching pencils.
2) Learn the method of using different grade of pencil to do sketching, shading and toning.
3) Learn the techniques of fine pencil drawing to explore different fine art subjects such as animals, birds, flowers, insect, still life, objects, scenery, etc.
4) Explore the use of pencil and various tools to create textures for different subjects.
5) Learn how to be creative in use of pencil for drawing and expression

Outcome

1) An understanding of basic principles of design and color, concepts, media and formats, and the ability to apply them to a specific aesthetic intent. This includes functional knowledge of the traditions, conventions, and evolutions of the discipline as related to issues of representation, illusion, and meaning. The development of solutions to aesthetic and design problems should continue throughout the degree program.
2) The ability to synthesize the use of drawing, two-dimensional design, and color, beginning with basic studies and continuing throughout the degree program toward the development of advanced capabilities.
3) Knowledge and skills in the use of basic tools, techniques, and processes sufficient to work from concept to finished product, including knowledge of paints and surfaces.

Chapter 1	Introduction to drawing for animation	2 Hours

1. Introduction
2. The sketchbook
3. About the author: The bohemian on the bus
4. Focal points
5. From scribbles to signs: the confidence
6. of a child
7. The big three: the square, circle and triangle
8. Overlapping shapes
9.

Chapter 2	Depth and shading	2 Hours

1. Foreshortening
2. Draw to tell stories
3. The plot thickens - have fun!
4. Through the page: journey to the
5. vanishing point!
6. Objects in space: posts and tracks

Chapter 3	Perspectives	2 Hours

1. Conquering deep space: from two to three
2. dimensions
3. One point perspective: scale and drama
4. Two-point (angular) perspective: ah, yes, that's
5. Three-point (oblique) perspective:
6. power and might!
7. Inclined plane perspective and hidden vanishing
8. points: putting on a roof

Chapter 4	Drawing real Life	2 Hours

1. Continue to trust your eyes: reality, imagination and fantasy.
2. Line quality
3. Sketching and drawing from life
4. Sketching from television. dance, sport or musicians

Reference books

- Sketching for Animation
- Gesture Drawing for Animation

Concept of Animation

Objective

1) Understand the concept of animation
2) Learn cutting corners of art and technical aspect of the course.
3) Learn principles of animation.

Outcome

1) Student will be able to build his own animation previz with storyboards by exploring time and principles of the animation
2) Explore the time of animation from traditional to computer.

Chapter 1	Introduction to Animation	2 Hours

1. What is Animation?
2. How does it work?
3. History of animation
4. Need for animation
5. Animation techniques

Chapter 2	Traditional Animation Process vs Computer Animation	2 Hours

1. Computer Animation
2. Traditional Animation

Chapter 3	Principles of Animation	2 Hours

1. Stretch and Squash
2. Timing and Spacing
3. Ease in and Ease out
4. Arcs
5. Follow Through and Overlapping
6. Staging
7. Anticipation
8. Exaggeration
9. Straight Ahead and Pose to Pose
10. Solid Drawing

11. Appeal
12. Secondary Action

Chapter 4	Importance of Storyboarding	2 Hours

1. What is a Storyboard?
2. Need for Storyboards
3. How to Make a Storyboard?
4. Types of Storyboards
5. Why is a Storyboard Important?

Chapter 5	Production Pipeline	2 Hours

1. Introduction to a Model Sheet
2. Character Development
3. 2d Animation production pipeline

Reference books

Storyboards

Objective

1) This course is for students majoring in Animation and Game Art. It introduces the necessary tasks in the
2) storytelling phase of an animation project. Students will learn how to develop and design visual
3) storyboards and how to sell their storyboard ideas

Outcome

1) Students will be able to understand framing shots with aesthetics, camera angles, mood.
2) This will generate movie before the movie is actually into production and can be visualized to correct modify accordingly.

Chapter 1	1.The History of Storyboards	2 Hours

6. Early Storyboards
7. Storyboards from the Disney Studio
8. Plane Crazy (1928)
9. Who Hires Storyboard Artists?
10. Independent Contractors vs Staffers
11. Staffers
12. Independent Contractors (aka Freelancers)

Chapter 2	Visual Literacy	2 Hours

7. Screen Reference
8. The Story Point
9. Emotional Response
10. Visual Appeal
11. Composition within Your Picture Frame
12. Working with Shapes
13. Lines
14. The Rule of Thirds
15. Design of the Shapes
16. Focal Point
17. Depth
18. Perspective
19. Contrast
20. Foreground, Middle Ground, and Background
21. Overlapping Forms
22. Change in Size

Chapter 3	Drawing for Storyboards	2 Hours

13. Your Drawing Alphabet: SICO Shapes
14. S-Curves
15. Straight Lines
16. C-Curves
17. Ellipses
18. Compound Shapes
19. The Art of the Rough
20. Drawing Shortcuts
21. Simplify
22. Characters
23. Star People
24. Poses
25. Hands
26. Heads
27. Eyes 54

Chapter 4	Cinema Language	2 Hours

6. Aspect Ratios
7. 1.33:1
8. 1.66:1
9. 1.78:1
10. 1.85:1
11. 2.35:1
12. Shot Choice
13. Extreme Wide Shot (EWS)
14. Wide Shot (WS)
15. Full Shot (FS)
16. Cowboy Shot
17. Medium Shot (MS)
18. Close Up Shot (CU)
19. Choker Shot
20. Extreme Close Up (ECU)
21. Over the Shoulder Shot (OTS)
22. Point of View Shot (POV)
23. Reverse Shot

24. Reaction Shot
25. Insert Shot
26. Camera Position and Height
27. Camera Position Affects Emotion
28. Eye Line
29. Pivoting Motions of the Camera: Panning and Tilting
30. Moving Camera Shots
31. Other Specialized Shots
32. Camera Lenses
33. Long Lens (Narrow-angle Lens)
34. Short Lens (Wide-angle Lens)
35. Fisheye Lens
36. Zoom In/Zoom Out
37. Rack Focus
38. Drawing Different Camera Lenses
39. Drawing a Long Lens (40–120 mm)
40. Drawing a Short-angle Lens (18–40 mm)
41. Screen Direction

42. The 180° Rule
43. 180° Rule with Three Characters
44. Breaking the 180° Rule
45. Case Example

Chapter 5	**Story Structure**	2 Hours

4. What Is a Story?
5. Story
6. Protagonist
7. Motivation
8. Conflict
9. Antagonist
10. Inciting Incident
11. Plot
12. Climax
13. Resolution
14. Story Charts
15. Incorporating Design in Your Scenes
16. Rhythm
17. Choice
18. Juxtaposition of Shots
19. Secondary Action
20. Use Depth to Support Your Staging

Chapter 6	**Storyboard Types**	4 Hours

1. Beat Boards
2. Continuity Boards/Shooting Boards
3. Live Action Boards
4. Feature Animation Boards
5. Advertising Storyboards/Pitch Boards
6. TV Animation Boards
7. Video Game Storyboards
8. Previs

Chapter 7	**Storyboarding**	2 Hours

1. The Storyboard Process
2. Script Analysis
3. Fulfilling the Story Point
4. Subtext
5. Thumbnails
6. Starting Your Rough
7. Double Check Your Work
8. Finished Storyboards
9. Digital Storyboards
10. Checklist for Identifying Common Mistakes

Chapter 8	**Advanced Storyboard Techniques**	3 Hours

1. Creating Efficiency
2. Complex Camera Moves
3. Transitions
4. Visual Transitions

5. Story Point Transitions
6. Audio Transitions
7. Effects Transitions
8. Cutting Styles
9. Creative Dialogue
10. Creative Screen Direction
11. Awesome Action Scenes
12. Winning Animatics
13. Creating the Illusion of Parallax

Reference books

- **Motion In Art, 3rd Edition**

Course Type: Core Credit | Course Code: BVOC 114

Paper-2: Stop Motion Animation

Teaching Scheme	**No. of Credits**	**Examination Scheme**
3 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1) This course will offer skill development in the use of software to develop storyboards and Stop Motion animation including creating, importing and sequencing media elements to create multi-media presentations.
2) Emphasis will be on conceptualization, creativity, and visual aesthetics. This course takes the students through various aspects of Stop Motion animation using a variety of materials and techniques.
3) Developing concepts, storyboarding and production of several stop motion animations will be accomplished.

Outcome

1) To build a whole new piece of art in clay and with real world props.
2) Learn compositions in miniatures and practice clay modelling, sets, lights and photography to create interesting stories.
3) Relate some knowledge of the history of animation
4) Assess and critique past and current animation trends
5) Demonstrate progress in basic sculpting, puppet making and animation skills
6) Critically analyze your creative work and the work of others

Chapter 1	**Building Puppets**	12 Hours

1. Plug-In Wire and Sockets
2. Hands and Feet
3. Puppet Anatomy
4. Silicone
5. Casting a Silicone Puppet
6. Making a Silicone Mold
7. Plastic Casting
8. Face Armatures
9. Replacement Faces and Rapid Prototyping
10. Replacement Animation Puppets

Chapter 2	**Digital Cinematography**	6 Hours

1. Digital Camera Basics
2. ISO
3. Aperture and Shutter Speed
4. Depth of Field
5. White Balance
6. Camera Effects
7. Rack Focus
8. Blurring Effects
9. Camera Moves
10. Stereoscopic Photography

Chapter 3	**Character Animation**	10 Hours

1. Animation Technique
2. liming
3. Arcs
4. Overlapping Action
5. Anticipation
6. Performance
7. Two-Character Dialogue
8. Lip Sync

Chapter 4	**Visual Effects**	8 Hours

1. Film Compositing
2. Digital Compositing
3. Split-Screen and Masks
4. Blue/Green Screen
5. Front Light/Back Light

6. Advanced Compositing for Ava
7. Effects
8. Rig and Shadow Removal
9. Motion Blur

Reference books

- The advance art of stop motion animation By Ken A Priebe
- The art of stop motion animation By Ken A Priebe

Course Type: Core Credit | Course Code: BVOC 115

Paper-3: 2d Animation - Adobe Animate

Teaching Scheme	No. of Credits	Examination Scheme
3 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1) Emphasis will be on conceptualization, creativity, and visual aesthetics. This course takes the students through various aspects of animation using a variety of 2-dimensional software.
2) Developing concepts, storyboarding and production of several 2-dimensional animations will be accomplished.

Outcome

1) Development of strong drawing, composition, anatomy, color and perspective skills.
2) knowledge of animation fundamentals and believability in motion, timing and structure.

Chapter 1	GETTING ACQUAINTED	2 Hours

1. Starting Adobe Animate CC and Opening a File
2. Understanding Document Types
3. Getting to Know the Workspace
4. Working with the Library Panel
5. Understanding the Timeline
6. Organizing Layers in a Timeline
7. Using the Properties Panel
8. Using the Tools Panel
9. Undoing Steps in Animate

10. Previewing Your Movie
11. Modifying the Content and Stage
12. Saving Your Movie

Chapter 2	CREATING GRAPHICS AND TEXT	2 Hours

1. Understanding Strokes and Fills
2. Creating Shapes
3. Making Selections
4. Editing Shapes
5. Using Gradient and Bitmap Fills
6. Using Variable-Width Strokes
7. Using Swatches and Tagged Swatches
8. Creating Curves
9. Using Transparency to Create Depth
10. Being Expressive with the Paint Brush
11. Creating and Editing Text
12. Aligning and Distributing Objects
13. Converting and Exporting Art

Chapter 3	CREATING AND EDITING SYMBOLS	2 Hours

1. Importing Adobe Illustrator Files
2. About Symbols
3. Creating Symbols
4. Importing Adobe Photoshop Files
5. Editing and Managing Symbols
6. Changing the Size and Position of Instances
7. Changing the Color Effect of an Instance
8. Understanding Display Options
9. Applying Filters for Special Effects
10. Positioning in 3D Space

Chapter 4	ANIMATING SYMBOLS	2 Hours

1. About Animation
2. Understanding the Project File
3. Animating Position
4. Changing the Pacing and Timing
5. Animating Transparency
6. Animating Filters
7. Animating Transformations
8. Changing the Path of the Motion
9. Swapping Tween Targets
10. Creating Nested Animations
11. Graphic Symbols
12. Easing
13. Frame-by-Frame Animation
14. Animating 3D Motion
15. Animating Camera Moves
16. Testing Your Movie

Chapter 5	ADVANCED MOTION TWEENING	2 Hours

1. Getting Started
2. About the Motion Editor

3. Understanding the Project File
4. Adding Motion Tweens
5. Editing Property Curves
6. Viewing Options for the Motion Editor
7. Copying and Pasting Curves
8. Adding Complex Eases

Chapter 6	ANIMATING SHAPES AND USING MASKS	4 Hours

1. Getting Started
2. Animating Shapes
3. Understanding the Project File
4. Creating a Shape Tween
5. Changing the Pace
6. Adding More Shape Tweens
7. Creating a Looping Animation
8. Using Shape Hints
9. Previewing Animations with Onion Skinning
10. Animating Color
11. Creating and Using Masks
12. Animating the Mask and Masked Layers
13. Easing a Shape Tween

Chapter 7	NATURAL AND CHARACTER ANIMATION	2 Hours

1. Natural Motion and Character Animation with Inverse Kinematics
2. Creating a Walk Cycle
3. Disabling and Constraining Joints
4. Inverse Kinematics with Shapes
5. Simulating Physics with Springiness

Chapter 8	CREATING INTERACTIVE NAVIGATION	3 Hours

1. About Interactive Movies
2. Creating Buttons
3. Understanding ActionScript 3.0
4. Preparing the Timeline
5. Adding a Stop Action
6. Creating Event Handlers for Buttons
7. Creating Destination Keyframes
8. Creating a Home Button Using Code Snippets
9. Code Snippets Options
10. Playing Animation at the Destination
11. Animated Buttons
12.

Chapter 9	WORKING WITH SOUND AND VIDEO	3 Hours

1. Understanding the Project File
2. Using Sounds
3. Understanding Video
4. Using Adobe Media Encoder CC
5. Playback of External Video in Your Project
6. Working with Video and Transparency
7. Embedding Video
8.

Chapter 10	PUBLISHING	3 Hours

1. Understanding Publishing
2. Publishing for Flash Player
3. Publishing for HTML5
4. Using Classic Tweens
5. Exporting to HTML5
6. Inserting JavaScript
7. Converting to HTML5 Canvas
8. Publishing a Desktop Application
9. Publishing to Mobile Devices

Reference books

- Adobe Animate CC Classroom in a book

Guidelines: **Practical's/Assessment/Presentations**

Practical's: Faculty has to take Daily practical of 1 hour each for 30 days.
Presentations: In class/Lab/projector-based presentations along with the submission of the PPT file.
Software Assignments: Student has to submit Master file along with the Jpg version of the same file (1920X1080).
For e.g. A *.**psd** File for **photoshop** assessment along with its **jpg.**
Images/Photography: All Image submission should be 1920X1080 for the respective subject. Photography and digital film making can have 4k or 4k+ resolution.
Videos: All video submission should be 1920X1080 for the respective subject.
Renders: All Rendered submissions should be 1920X1080 for the respective subject.
Naming conventions: File Naming should be in given format for all type of assignments.

College_Year_Studentname_subject_Assesmentname.Ext
E.g. APC_FYBvoc2021_VikasJadhav_Illustrator_LogoDesign.Jpg

Drawings: The Drawing assignments are to be submitted by the student in the form of a journal/file containing individual assignment sheets. Each assignment includes the Assignment Title, Problem statement, Date of submission, Assessment date, Assessment grade and instructor's sign.

BVOC 116	Drawing Assessment's	Paper- 4 Credits 6

Assessment 1:
i. Line, straight or curved, horizontal or vertical, thick or think. Circles, other basic shapes.
ii. Complete a contour line drawing of a made-up character of your choice.
iii. Complete gesture drawing of a person or animal.
iv. Draw a favorite cartoon character that you remember from your childhood.

Assessment 2:
i. Draw the five steps to one of your daily activities.

Assessment 3:
i. Face Shapes
ii. Noses
iii. Eyes
iv. Mouth

Assessment 4:
i. Draw a figure using the stick figure – wire framing technique.

Assessment 5:
i. Try drawing one of your hands with detail.
ii. Try drawing one of your feet, without shoes, in detail.
iii. Draw a pair of creature hands.
iv. Draw a pair of Kids feet.

Assessment 6:
i. A caricature of person
ii. A caricature from family
iii. A caricature of a celebrity.
iv. A caricature of one of your teachers.

Assessment 7:
i. Draw a landscape, an outdoor natural location.
ii. Draw a city.
iii. Draw a village location.
iv. Draw a room from the inside.

Assessment 8:
i. Sketch character from household objects or products.

Assessment 9:
i. Copy four cartoon characters and alter the style

Assessment 10:
i. Sketch one of your favorite superhero characters.

BVOC 117	2d Animation Project	Paper- 5 Credits 6

Assessment 1: 2d Animation Project of 20 second. Concepts can be decided by student.
Assessment 1: Create a PowerPoint presentation of Concept of Animation content and present it to class.

BVOC 118	Hands on Training (Project – 2D/stop Motion Animation)	Paper- 6 Credits 6

Assessment 1: Create a 2d /stop motion project of minimum 20 sec and maximum of 30 sec.

Course Type: Core Credit Course Code: BVOC 119

Paper-1: **Communication and Personality Development**

Teaching Scheme	No. of Credits	Examination Scheme
3 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1. To develop effective communication
2. To Practice reading and writing skills.
3. Creation of talented artist with skills to develop organizational and routine values

Outcome

1. Student will able to use their skills in better understanding of work as well as their product.
2. Student will effectively communicate and participate the quality value in development of a pipeline.

Chapter 1	**Profile of an Effective Communicator**	1 Hours

1. An Analysis of the Case
2. Review Your learning
3. Endnote

Chapter 2	**Theatre Technique for Effective Communication and Personality Development**	2 Hours

1. What is the Theatre?
2. What is a Play?
3. Story

4. Six Stages of Play
5. Issues
6. Theatre and Communication Skills
7. Theatre Technique
8. What is Personality?
9. Objectives
10. Pedagogy
11. Areas Covered
12. Business Communication
13. Interpersonal Communication
14. Oral Communication
15. Written Communication
16. Body Language
17. Interpersonal Relations
18. Application Areas
19. Session-wise Plan
20. Evaluation
21. Software and Hardware Needed
22. The End Product
23. Method
24. Script Writing
25. Script Reading
26. Final Presentation
27. Conclusion
28. Summary
29. Case: Stanford Prison Experiment
30. Question to Answer
31. Review Your Learning
32. Reflect on Your Learning
33. Apply Your Learning
34. Self-Check Your Learning
35. Endnotes

Chapter 3	Reading Skills	2 Hours

1. What is reading?
2. Understanding
3. How do We Read?
4. How Do Our Eyes Move and Pause and Move?
5. Know Your Reading Speed
6. Enhancement of Reading Ability/Purpose of Reading
7. The Nature of Reading Material/The Reading Style
8. Styles of Reading
9. Slow Reading Style
10. Normal Reading Style
11. Rapid Reading Style—Skimming
12. Surveying—Process of Reading a Book, Long Article, or Report
13. Scanning
14. Know the Text Organization
15. Training of Eyes
16. Guidelines for Effective Reading
17. Do's
18. Don'ts
19. Reading Efficiency
20. Watch the Eye Movement
21. Summary
22. Case: Chorus Reading

23. Review Your Learning
24. Reflect on Your Learning
25. Apply Your Learning
26. Self-Check Your Learning
27. Reading Exercises
28. Endnote

Chapter 4	Speaking Skills	2 Hours

1. Speaking
2. The Art of Speaking
3. Goals of Speaking
4. Speaking Styles
5. The Speaking Process
6. Guidelines for Developing Speaking Skills
7. What is Oral Communication?
8. Importance of Oral Communication Skills
9. Choosing the Form of Communication
10. Principles of Successful Oral Communication
11. Guidelines for Effective Oral Communication
12. Barriers to Effective Oral Communication
13. Three Aspects of Oral Communication—Conversing, Listening, and Body Language
14. Intercultural Oral Communication
15. INTERCULTURAL COMMUNICATION
16. Oral Communication and Electronic Media
17. Phones
18. Voice Mail
19. Conference Calls
20. Cell Phones
21. Video Conferencing
22. Summary
23. Case: Dealing with outsourcing Backlash
24. Questions to Answer
25. Review Your Learning
26. Reflect on Your Learning
27. Apply Your Learning
28. Self-check Your Learning
29. Endnotes

Chapter 5	Conversation Skills	2 Hours

1. What is Conversation?
2. Social Conversation
3. Effective Conversation
4. Conversation Control
5. Controlling the Direction of Conversation
6. Managing Negative Responses
7. Noticing and Recognizing Cues and Clues
8. Interpreting Signs and Signals
9. Avoiding Parallel Conversation
10. Practicing Sequential Conversation
11. Using Reflection and Empathy
12. Cultivating a Sense of Timing
13. Summarizing
14. Transactional Analysis (TA)
15. Psychological Characteristics of Ego States
16. Applications of Conversation Control

17. Meetings
18. Being Assertive Without Being Aggressive
19. Controlled Response to Conversational Attacks
20. Negotiating Through Conversation Control
21. Summary
22. Case: Discussing Vandalism
23. Review Your Learning
24. Reflect on Your Learning

25. Apply Your Learning
26. Questions to Answer
27. Self-check Your Learning
28. Endnotes

Chapter 6	Listening Skills	2 Hours

36. What is the Theatre?
37. What is a Play?
38. Story
39. Six Stages of Play
40. Issues
41. Theatre and Communication Skills
42. Theatre Technique
43. What is Personality?
44. Objectives
45. Pedagogy
46. Areas Covered
47. Business Communication
48. Interpersonal Communication
49. Oral Communication
50. Written Communication
51. Body Language
52. Interpersonal Relations
53. Application Areas
54. Session-wise Plan
55. Evaluation
56. Software and Hardware Needed
57. The End Product
58. Method
59. Script Writing
60. Script Reading
61. Final Presentation
62. Conclusion
63. Summary
64. Case: Stanford Prison Experiment
65. Question to Answer
66. Review Your Learning
67. Reflect on Your Learning
68. Apply Your Learning
69. Self-Check Your Learning
70. Endnotes

Chapter 7	Non-verbal Skills	2 Hours

1. What is Non-verbal Communication?
2. Meta-communication
3. Kinesics Communication

4. Characteristics of Non-verbal Communication
5. Classification of Non-verbal Communication
6. Ekman's Classification of Communicative Movements
7. Face Facts
8. Positive Gestures
9. Negative Gestures
10. Lateral Gestures
11. Responding to Power Posturing

12. Guidelines for Developing Non-verbal Communication Skills
13. Communication Breakdown
14. Summary
15. CASE: Everest Textile mills
16. Review Your Learning
17. Reflect on Your Learning
18. Apply Your Learning
19. Self-check Your Learning
20. Endnote

Chapter 8	**Writing Skills**	1 Hours

1. The Art of Writing
2. The Skills Required in Written Communication
3. The Purpose of Writing
4. Writing to Inform
5. Writing to Persuade
6. INFORMATORY WRITING
7. PERSUASIVE WRITING
8. Clarity in Writing
9. EXAMPLES OF CLEAR AND UNCLEAR WRITING
10. Principles of Effective Writing
11. Accuracy
12. Brevity
13. REWRITING A LETTER
14. Language, Tone, and Level of Formality
15. Summary
16. Case: On Writing Well
17. Review Your Learning
18. Reflect on Your Learning
19. Apply Your Learning
20. Self-check Your Learning
21. Endnotes
22. PART II BUSINESS COMMUNICATION

Chapter 9	**Nature and Process of Communication**	2 Hours

1. The Role of Communication
2. AN INSTANCE OF UNCLEAR COMMUNICATION
3. Defining Communication
4. Classification of Communication
5. The Purpose of Communication
6. Communication to Inform
7. Communication to Persuade
8. The Process of Communication
9. The Linear Concept of Communication
10. The Shannon–Weaver Model
11. The Two-way Communication Process

12. The Elements of Communication
13. The Major Difficulties in Communication
14. Barriers to Communication
15. Incorrect Assumptions
16. Psychosocial Barriers
17. Conditions for Successful Communication
18. The Seven C's of Communication
19. Universal Elements in Communication

20. HOW SENTENCE STRUCTURE AFFECTS MEANING
21. Communication and Electronic Media
22. Communication and Social Media
23. Summary
24. Case: Communication Failure
25. Review Your Learning
26. Reflect on Your Learning
27. Apply Your Learning
28. Self-check Your Learning
29. Endnotes

Chapter 10	**Organizational Communication**	2 Hours

1. The Importance of Communication in Management
2. Some Important Functions of Management
3. How Communication Is Used by Managers
4. Communication Concerns of the Manager
5. Human Needs
6. Theory X and Theory Y
7. Communication Training for Managers
8. Communication Structures in Organizations
9. Vertical Communication
10. Horizontal Communication
11. Line and Staff Management
12. Formal Communication
13. Informal Communication
14. Information to be Communicated at the Workplace
15. Summary
16. Case: Communication Breakdown at City Hospital
17. Review Your Learning
18. Reflect on Your Learning
19. Apply Your Learning
20. Self-check Your Learning
21. Endnotes

Chapter 11	**Cross-cultural Communication**	2 Hours

1. Globalization and Intercultural Communication
2. The New Global Mantra: Go Local
3. Cultural Sensitivity
4. Meetings and Social Visits
5. Group Behavior
6. Paying a Visit
7. Addressing Others
8. Developing Cultural Intelligence
9. High-context Cultures
10. Low-context Cultures
11. Time As a Cultural Factor

12. Space As a Cultural Factor
13. Some Examples of Cultural Diversity
14. Japan
15. France
16. Germany
17. Brazil
18. Guidelines for Intercultural Communication
19. E-mail and Intercultural Communication

20. Language
21. Culture
22. SAMPLE E-MAILS
23. Summary
24. Case: Intercultural Lessons from Crash
25. Review Your Learning
26. Reflect on Your Learning
27. Apply Your Learning
28. Self-check Your Learning
29. Endnotes

Chapter 12	**Business Letters, Memos, and E-mails**	2 Hours

1. Introduction
2. Writing Routine and Good-news Letters
3. Routine Claim Letters and 'Yes' Replies
4. Routine Request Letters and 'Yes' Replies
5. Routine Orders and Their 'Yes' Replies
6. Guidelines for a 'Yes' Reply
7. Guidelines for a 'No' Reply
8. Writing Persuasive Letters
9. WRITING A PERSUASIVE LETTER
10. Writing Memos
11. How to Write a Memo
12. Uses of a Memo
13. Essentials of Good Business Letters and Memos
14. Simplicity
15. Clarity
16. Conciseness
17. Standard and Neutral Language
18. You-Attitude
19. Sincerity and Tone
20. Emphasis
21. Planning, Writing, and Revising: The Three Steps of Successful Writing
22. REDRAFTING A MEMO
23. Form and Layout of Business Letters
24. Business-letter Styles
25. Layout and Formatting Guidelines
26. Writing E-mails
27. Receiver's E-mail Account
28. Subject Line
29. Sending Copies
30. A SERIES OF E-MAILS
31. Summary
32. Case: A Reply Sent to an Erring Customer
33. Review Your Learning
34. Reflect on Your Learning
35. Apply Your Learning
36. Self-check your Learning

Chapter 13	Social Media	2 Hours

1. Introduction
2. Let the first 'Social Media Games' begin!
3. The Age of Internet Communication Tools
4. What does Social Media mean?

5. Open Diary
6. Weblog
7. Characteristics of Social Media
8. Classification of Social Media
9. Social Presence
10. The Concept of Self-presentation
11. Nature and Scope of Six Types of Social Media
12. Collaborative Projects
13. Blogs
14. Content Communities
15. Social Networking Sites
16. Virtual Game Worlds
17. Virtual Social Worlds
18. Purpose/Choosing the Most Suitable Social Media
19. Target Group
20. Revisiting the Communication Theory
21. Summary
22. Case: Was London Olympics 2012 the 'Social-Olympics'?
23. Review Your Learning
24. Reflect on Your Learning
25. Apply Your Learning
26. Self-check Your Learning
27. Endnotes

Chapter 14	Business Reports	2 Hours

1. What is a Report?
2. The Purpose of a Report
3. Kinds of Reports
4. The Terms of Reference
5. The Objectives of a Report
6. Planning and Organizing Information
7. Sequencing Information
8. Outline As a Structuring Device
9. Writing Reports
10. Structure of a Report
11. Basic and Subsidiary Parts of a Report
12. Short Management Reports
13. Memos
14. Letters
15. Long Formal Reports
16. The Title Page
17. Acknowledgements
18. Cover Letter
19. Letter of Transmittal
20. Table of Contents
21. Abstract and Executive Summary
22. Discussion and Analysis of Findings
23. Glossary

24. Appendix
25. Bibliography and References
26. Index
27. Using Diagrams and Visual Aids in Reports
28. Use of Tables
29. Index
30. Use of Graphics in Reports
31. How to Use Figures and Diagrams in Reports

32. Summary
33. Case: Survey Report for India Representative Office of HRC Business School, France
34. Review Your Learning
35. Reflect on Your Learning
36. Apply Your Learning
37. Self-check Your Learning
38. Endnotes

Chapter 15	**Effective Presentations**	2 Hours

1. Introduction
2. What is a Presentation?
3. Essential Characteristics of a Good Presentation
4. The Difference Between a Presentation and a Lecture
5. The Difference Between a Presentation and a Written Report
6. Preparing a Presentation
7. Identify the Purpose of the Presentation
8. Analyze the Audience and Identify Their Needs
9. Design and Organize the Information
10. Decide on the Medium of Presentation and Visual Aids
11. Time the Presentation
12. Become Familiar with the Location of the Presentation
13. Delivering the Presentation
14. Rehearsal
15. Body Language
16. Handling Questions and Debate
17. Tips to Fight Stage Fright
18. Summary
19. Case: The Presentation Effect
20. Review Your Learning
21. Reflect on Your Learning
22. Apply Your Learning
23. Self-check Your Learning

Chapter 16	**Business Etiquette**	2 Hours

1. What is business Etiquette?
2. Introductions
3. Self-introductions
4. Introducing Others
5. Handshakes and Non-verbal Gestures
6. Telephone/Cell Phone Etiquette
7. Making a Call
8. Common Telephone Courtesies
9. Telephone Etiquette Observed by Administrative Assistants
10. Telephone Precautions
11. Business Dining
12. The Host

13. The Guest
14. Table Manners
15. Interaction with foreign Visitors
16. Business manners IN different countries
17. Americans
18. Europeans
19. The Japanese
20. Arabs

21. Indians
22. Inter-organizational Etiquette
23. Summary
24. Case: Cultural Sensitivity
25. Review Your Learning
26. Reflect on Your Learning
27. Apply Your Learning
28. Self-check Your Learning
29. PART III STRUCTURED APPLICATIONS

Chapter 17	Communication for Effective Marketing	2 Hours

1. Objectives of Marketing Communication
2. Tools of Marketing Communication
3. Some New Tools of Marketing Communication
4. Direct Marketing
5. Direct Selling
6. Event Marketing
7. Exhibit Marketing
8. Consumer, Industrial, and Trade Marketing Communication
9. Brand, Institutional, and Corporate Marketing Communication
10. Marketing Communication Continuum
11. Integrated Marketing Communications
12. Summary
13. Case: Celebrity Endorsement: Shaken or Stirred
14. Review Your Learning
15. Reflect on Your Learning
16. Apply Your Learning
17. Self-check Your Learning
18. Endnotes

Chapter 18	Communication for Effective Negotiations	2 Hours

1. What is Negotiation?
2. The Nature of Negotiation
3. The Need for Negotiation
4. Situations Requiring Negotiation
5. Situations Not Requiring Negotiation
6. Factors Affecting Negotiation
7. Location
8. Timing
9. Subjective Factors
10. Persuasive Skills and the Use of You-attitude
11. Stages in the Negotiation Process
12. The Preparation Phase
13. The Negotiation Phase
14. The Implementation Phase
15. Negotiation Strategies

16. Initial Strategies
17. During the Discussion
18. Reaching an Agreement
19. Summarizing
20. Deadlocks
21. Summary
22. Case: Farsighted Negotiation
23. Review Your Learning

24. Reflect on Your Learning
25. Apply Your Learning
26. Self-check Your Learning
27. Endnotes

Chapter 19	Communication for Conflict Management	2 Hours

1. What is Conflict?
2. Armed Conflict
3. Characteristics of Conflict
4. Dynamic Nature of Conflicts
5. State of Tension
6. Emotional Residue of Conflict
7. Management of Conflict
8. Negative Conflicts and Positive Conflicts
9. Characteristics of Negative Conflicts
10. Characteristics of Positive Conflicts
11. Interpersonal Conflict as a General State in Modern Life
12. Communication as a Bridge of Interpersonal Understanding
13. Conflict Management Through Communication
14. Management Skills
15. Communication Skills
16. Managing the Process of Communication in Conflict
17. The S-TLC Strategy Conflict Management
18. Purposive Communication in Conflict
19. Verbal Skills for Communicating in Conflict
20. Use of Personalized Language
21. Conflict Over Intangible Issues
22. Tangible Issues and Conflicts
23. Trust Building
24. Summary
25. Case: MHAI
26. Review Your Learning
27. Reflect on Your Learning
28. Apply Your Learning
29. Self-check Your Learning

Chapter 20	Communication for Employment	2 Hours

1. Applying for Jobs
2. Writing A CV
3. The Relationship Between a Résumé and an Application Letter
4. The Résumé of a Recent Graduate
5. Heading
6. Objective
7. Education
8. Work Experience
9. Awards and Honours

10. Activities
11. References
12. Summary
13. Guidelines for Preparing a Good CV
14. Suitable Organization
15. Appropriate Length
16. Drafting an application Letter
17. The First Paragraph

18. The Second Paragraph
19. The Third Paragraph
20. General Tips
21. Interviews
22. Types of Interviews
23. What Does a Job Interview Assess?
24. Focus of Job Interviews
25. Strategies for Success at Interviews
26. Answers to Some Common Interview Questions
27. Participating in a Group Discussion
28. Leadership
29. GD Protocol
30. Discussion Techniques
31. Listening
32. Summary
33. Case: An Employment Interview
34. Review Your Learning
35. Reflect on Your Learning
36. Apply Your Learning
37. Self-check Your Learning

Chapter 21	**Written Analysis of Cases**	2 Hours

1. What is a Case?
2. Characteristics of a Case and Its Analysis
3. The Process of Case Analysis
4. Step 1: Study the Case
5. Step 2: Identify the Problem
6. Step 3: Define the Problem
7. Step 4: Identify the Causes of the Problem
8. Step 5: Develop Alternative Solutions
9. Step 6: Evaluate the Alternatives
10. Step 7: Develop a Plan of Action
11. Requirements for a Case Analysis
12. Analysis of Communication Breakdown at City Hospital
13. The Structure of a Written Case Analysis
14. Summary
15. Case: Accepting a Contract
16. Review Your Learning
17. Reflect on Your Learning
18. Apply Your Learning
19. Self-check Your Learning

Chapter 22	**Summer Project Report**	2 Hours

1. Introduction
2. The Difference Between Summer Project Reports and Business/Technical Reports
3. General Guidelines for Writing Summer Project Reports

4. Objective
5. Selection of a Problem
6. The Role of Summer Project Mentors
7. Writing the Project Proposal
8. Components of the Summer Project Report
9. Cover and Title Page
10. Approval of Organization and Faculty Guides
11. Abstract

12. Acknowledgements
13. Table of Contents
14. List of Tables, Figures, Appendices, and Abbreviations
15. Chapter I: Introduction
16. Chapter II: Research Design
17. Chapter III: Results and Conclusions
18. Chapter IV: Recommendations
19. References
20. Appendices
21. Project Presentation
22. Summary
23. Case: Executive Summary of a Consumer Behavior Study
24. Review Your Learning
25. Reflect on Your Learning
26. Apply Your Learning
27. Self-check Your Learning

Chapter 3	**Reading Skills**	2 Hours

30. What is reading?
31. Understanding
32. How do We Read?
33. How Do Our Eyes Move and Pause and Move?
34. Know Your Reading Speed
35. Enhancement of Reading Ability/Purpose of Reading
36. The Nature of Reading Material/The Reading Style
37. Styles of Reading
38. Slow Reading Style
39. Normal Reading Style
40. Rapid Reading Style—Skimming
41. Surveying—Process of Reading a Book, Long Article, or Report
42. Scanning
43. Know the Text Organization
44. Training of Eyes
45. Guidelines for Effective Reading
46. Do's
47. Don'ts
48. Reading Efficiency
49. Watch the Eye Movement
50. Summary
51. Case: Chorus Reading
52. Review Your Learning
53. Reflect on Your Learning
54. Apply Your Learning
55. Self-Check Your Learning
56. Reading Exercises
57. Endnote

Reference books
➢ The Art and Science of Business Communication, 4e, 4th Edition by P.D. Chaturvedi, Mukesh Chaturvedi

Type: Core Credit | Course Code: BVOC 120

Paper-2: **3D Architectural Design and Visualization**

Teaching Scheme	No. of Credits	Examination Scheme
3 Hours / Week	4	IE: 50Marks UE: 50Marks

Objective

1) Learn design aspects and able to explore the emerging needs and technology for a good design.
2) To learn how to write for print and web color models
3) Students must be able to manipulate type to convey precisely what's intended and demonstrating the impact importance of good typography.
4)

Outcome

1) Students will be able to understand about computer graphics.
2) Students can create a concept-based design as per the subject and theme.

Chapter 1	Introduction	8 Hours

1.
2. Understanding the user interface
3. The application button
4. The quick access toolbar
5. The info bar
6. The ribbon area
7. The file tabs
8. The View Cube and navigation bar
9. The selection cursor
10. The command line/palette
11. The user coordinate system
12. The layout tabs
13. The status bar toggles
14. Navigating in AutoCAD
15. Selecting and panning
16. Zooming in and out

17. Making selections
18. A simple selection
19. The selection windows
20. The crossing windows
21. The "window lasso" selection
22. The "crossing lasso" selection
23. Setting units and limits
24. Setting units
25. Setting limits

26. Saving settings as a template
27. Saving a drawing file as DWG

Chapter 2	2D/3d Practice Drawings	8 Hours

1. 2d Drawing practices
2. Understanding the coordinate system
3. Cartesian coordinates
4. Polar coordinates
5. Using the Line command
6. Making lines with direct distance entry
7. Making lines using absolute coordinates
8. Using polar coordinates
9. Using relative coordinates
10. Making a drawing without coordinate values
11. The status bar modes
12. Using Dynamic Input
13. Using ortho mode
14. Using polar tracking
15. Making a circle
16. Center, radius, and diameter
17. 2-Point and 3-Point
18. Tan, Tan, Radius and Tan, Tan, Tan
19. Making an arc
20. Start, Center, End
21. Start, End, Radius
22. Center, Start, End
23. Making a rectangle
24. Making a rectangle using absolute coordinates
25. Making a rectangle using relative coordinates
26. Making a rectangle with Dynamic Input
27. Making a polygon
28. Inscribed and circumscribed polygons
29. Making polygons
30. The Move and Copy commands
31. The Rotate command
32. Simple Rotate
33. Rotate with Reference
34. The Fillet commands
35. The Trim command
36. The Extend command
37. 3d Drawing practices

Chapter 3	Making the Floor plan of a House	5 Hours

1. Making the outer and inner walls
2. Adding door window and other blocks

3. Adding wall thickness and text
4. Adding dimension and other annotations

Chapter 4	Making Elevations/ section Plans from floor plan	5 Hours

1. Adding front elevation
2. Finishing front elevation
3. Adding east elevation
4. Finishing east elevation
5. Making East West section
6. Adding details in section view
7. Finishing east west section view

Chapter 5	Making foundations, stair, circuits and mechanical couplings	8 Hours

1. Making top view of stair plan
2. Making front sectional view
3. Adding details in the view
4. Adding dimension and finishing
5. Creating Simple foundation plan
6. Adding details and finishing
7. Making the outline of circuit
8. Adding details and finishing
9. Universal Coupling
10. Oldham's Coupling

Reference books

- 60 AutoCAD 2D and 3D Drawings and Practical Projects
- Practical Autodesk AutoCAD 2021 and AutoCAD LT 2021

Introduction to Interior Design

Objective

1) Apply principles of construction theory and common practices.
2) Employ standard terminology appropriate to the construction industry.
3) Analyze construction processes.
4) Read, analyze, and organize construction documentation sets.

Outcome

1) Students will have successfully demonstrated craftsmanship skills in the presentation of the final project.
2) Students will successfully apply critical thinking to the process of constructing a model illustrating building systems.

3) Students will accurately assemble a building model based on construction details provided within a set of construction documents.
4) Students will have successfully demonstrated craftsmanship skills in the construction of the building model.

Chapter 1	FUNDAMENTALS	2 Hours

1. Starting an Interior Project, I
2. Starting an Interior Project II
3. Project Management I
4. Project Management II
5. Drawing Basics, I
6. Drawing Basics II
7. Drawing Basics III
8. Drawing Basics IV
9. Drawing Basics V
10. Drawing Basics VI
11. Drawing Basics VII
12. Presentation and Communication, I
13. Presentation and Communication II
14. Presentation and Communication III
15. Perspective on Fundamentals I
16. Perspective on Fundamentals II

Chapter 2	SPACE	2 Hours

1. Proportions of a Room I
2. Proportions of a Room II
3. Sequencing Spaces I
4. Sequencing Spaces II
5. Types of Rooms I
6. Types of Rooms II
7. Types of Rooms III
8. Types of Rooms IV
9. Code and Accessibility, I
10. Code and Accessibility II
11. Code and Accessibility III
12. Code and Accessibility IV
13. Perspectives on Space I
14. Perspectives on Space II

Chapter 3	SURFACE	2 Hours

1. Color I
2. Color II
3. Color III
4. Color IV
5. Material I
6. Material II
7. Material III
8. Material IV
9. Material V
10. Material VI

11. Material VII
12. Material VIII
13. Texture IX
14. Texture X
15. Pattern I
16. Pattern II
17. Perspectives on Surface I
18. Perspectives on Surface II

Chapter 4	ENVIRONMENTS	2 Hours

1. Natural Light I
2. Artificial Light II
3. Artificial Light III
4. Invisible Systems I
5. Invisible Systems II
6. Perspectives on Environments I
7. Perspectives on Environments II

Chapter 5	ELEMENTS	2 Hours

1. Details I
2. Details II
3. Details III
4. Furniture I
5. Furniture II
6. Elements and Display
7. Perspectives on Elements I
8. Perspectives on Elements II

Chapter 6	RESOURCES	4 Hours

1. Sustainability Guidelines
2. Manual Resources
3. Digital Resources
4. Perspectives on Resources I
5. Perspectives on Resources II

Reference books

- The Interior Design Reference & Specification Book

Paper-2: Architectural Design – 3d Max

Objective

1. Understand the process of architectural design with its key terms and from cad to final renders.
2. Create Architectural walkthroughs with greater accuracy and the process required to make it

Outcome

1. Can process best of visual imagery with realm
2. Learn advanced techniques in modifiers, compound objects, particles, vray and so on.

Chapter 1	3ds Max Interface	2 Hours

1. Navigating the Workspace
2. Transforming Objects Using Gizmos
3. Graphite Modeling Tools Set
4. Command Panel
5. Time Slider and Track Bar
6. File Management

Chapter 2	Your First 3ds Max Project	2 Hours

1. Setting Up a Project Workflow
2. The Secret to Accurate Modeling: Reference Material!
3. Building a Simple Model
4. Creating Details Using Splines
5. Lathing, Extruding, and Beveling to Create 3D from 2D
6. Bringing It All Together

Chapter 3	Modeling in 3ds Max: Architectural Model Part I Part II	2 Hours

1. Setting Up the Scene
2. Building the Room
3. Adding Special Details to the Room
4. Modeling in 3ds Max: Architectural Model
5. Modeling the Couch
6. Modeling the Lounge Chair
7. Bringing It All Together

Chapter 4	Introduction to Materials, Textures and UV	2 Hours

1. Navigating the Slate Material Editor
2. Identifying the Standard Material
3. Identifying the mental ray Material
4. Identifying Shaders
5. Building Materials for the Couch
6. Building Materials for the Lounge Chair
7. Building Materials for the Window
8. Defining UVs on the
9. Unwrapping UVs on the
10. Building and Applying Material

Chapter 5	Vray	2 Hours

1. Basics of Architectural Visualization
2. Considerations Regarding Light
3. Light in the Real World
4. Light in Computer Graphics
5. Light in Architecture
6. Why V-Ray?
7. Indirect Illumination
8. Ambient Occlusion
9. VRayLight
10. VRayIES
11. VRaySun
12. VRaySky
13. VRayPhysicalCam
14. V-Ray Materials
15. V-Ray Image Sampler (Antialiasing)
16. Linear Workflow (LWF)
17. Units
18. Gamma Correction
19. Adapt Paths
20. Asset Tracking

Chapter 6	Loft Apartment in Daylight	4 Hours

1. Introduction to Scene
2. Preparing the Scene Preset
3. File Link Manager
4. Open File
5. Adapt Viewport and Image Output
6. Camera Setup
7. Basic Settings for Texturing
8. Create Test Material
9. V-Ray Basic Setting
10. VRayLight Setup
11. Create and Assign Textures
12. Brick, White Paintwork
13. Brick, Exposed Brickwork
14. Floor, Parquet
15. Picture
16. White
17. Material
18. Matte
19. White Material, Reflecting
20. Chrome
21. Leather
22. Ceiling, Textured Plaster
23. Rug
24. Glass
25. Light Setup
26. Sunlight
27. V-Ray Rendering Settings
28. V-Ray

29. Indirect Illumination
30. Fine-Tuning
31. Rug, Displacement

32. Brick, Displacement

Chapter 7	Bathroom	2 Hours

1. Preparing the Scene
2. Open File
3. Camera Setup
4. Create Light Sources
5. Texture the Scene
6. Natural Stone, Floor
7. Natural Stone, Wall
8. Ceramic
9. Chrome
10. Plaster
11. Wood
12. Mirror Glass
13. Lacquer, Switch
14. Rubber
15. MultiMate rial, Showerhead
16. Frosted Glass
17. Fine-Tuning
18. Final Render Settings
19. V-Ray
20. Indirect
21. Illumination

Chapter 8	Bedroom at Night	3 Hours

1. Preparing the Scene
2. Open File
3. Link AutoCAD
4. Load Furniture
5. Assign Test Material.
6. Camera Setup
7. Basic Illumination of Scene
8. Ceiling Lights, Bathroom
9. Ceiling Lights, Bedroom
10. Texture the Scene
11. Plaster, White.
12. Parquet, Bedroom
13. Color Stripes
14. Tiles, Small
15. Wood, Window Frame
16. Wood, Light
17. Paper, Screen
18. Fabric
19. Fabric, Bathmat
20. Ceramic
21. Chrome
22. Mirror Glass
23. Lights, Ceiling
24. Glass
25. Glass, Glass Blocks
26. Fine-Tuning
27. Light, Mirror
28. Adapt Light Sources and Environment
29. Final Render Settings

30. Indirect Illumination

Chapter 9	T-Bone House, Exterior	3 Hours

1. Preparing the Scene
2. Open File
3. Camera Setup
4. Create Sunlight
5. Create Additional Materials
6. Wood, External.
7. Wood, Interior Glass
8. Glass, Basement Window Frame
9. White Light
10. Inside Light
11. Kitchen Light
12. Stairs
13. HDRI
14. Illumination
15. Fine-Tuning: Shadows on the Façade
16. Final Render Settings
17. V-Ray
18. Indirect Illumination

Chapter 10	Studio Setup	3 Hours

1. Preparing the Scene
2. Open File
3. Background and Camera
4. Create Canvas
5. Camera Setup
6. Illuminate Scene
7. Create Test Material
8. Create Plane Lights
9. Texture the Scene
10. Canvas
11. Chrome
12. Clear Glass
13. Glass, White Glass
14. Solid Plastic
15. Fabric
16. Finetuning
17. Rim Light

Reference books

- Architectural Rendering with 3d max and vray

Course Type: Core Credit — Course Code: BVOC 121

Paper-4: 3d Product Design

Teaching Scheme	No. of Credits	Examination Scheme
3 Hours / Week	4	IE: 50Marks UE: 50 Marks

Objective

1) To create tv social media content for commercial products.
2) Create branding by developing 3d models from blueprints or images references.
3) To fulfill the requirement of social media content for rapidly developing industries.

Outcome

1. Students will be able to create entire product demo/tvc for given product references.
2. All the 3d pipeline for product creation and composite/present with amazing visuals.

Chapter 1	Preparation and Introduction	6 Hours

1. Preparation and Introduction
2. Project Introduction
3. Modeling
4. Texture Prep
5. Load Can Asset
6. UV Take
7. Product Photo
8. Texture Creation
9. Label Bump Map
10. Reference Photos
11. Pure Ref

Chapter 2	Texturing, Lighting	6 Hours

1. Subdivision Setup
2. Camera Setup
3. Background Creation
4. Initial Lighting
5. Initial Texture
6. Lighting Tests
7. Stylized Looks
8. Base Aluminum Shader
9. Top Rim Aluminum
10. Label Material
11. AOV Prep
12. Finishing Aluminum
13. Output for Review
14. Studio Light Setup

Chapter 3	Animation	8 Hours

1. Intro
2. Prep Model

3. MoGraph Rig
4. Reference and AOV
5. Color Takes and Xpresso
6. Animation Fusion Comp
7. Instagram Loop
8. Instagram Comp
9. Instagram Completion

Chapter 4	Dynamics FX, Camera	8 Hours

10. Wate Droplets
11. Spash
12. Fire
13. Particles
14. Fields
15. Fluids
16. Camera
17. Review
18. Takes

Chapter 5	Render Comp	8 Hours

1. Rendering
2. Passes
3. Element 3d for after effects
4. Compositing with after effect

Reference books

- Greyscale gorilla Product visualization

Course Type: Core Credit Course Code: BVOC 125

Paper-1: 3d Design – 3d Pipeline, Modelling, Texturing

Guidelines: **Practical's/Assessment/Presentations**

Practical's: Faculty has to take Daily practical of 1 hour each for 30 days.
Presentations: In class/Lab/projector-based presentations along with the submission of the PPT file.
Software Assignments: Student has to submit Master file along with the Jpg version of the same file (1920X1080).
For e.g. A *.**psd** File for **photoshop** assessment along with its **jpg.**
Images/Photography: All Image submission should be 1920X1080 for the respective subject. Photography and digital film making can have 4k or 4k+ resolution.
Videos: All video submission should be 1920X1080 for the respective subject.
Renders: All Rendered submissions should be 1920X1080 for the respective subject.
Naming conventions: File Naming should be in given format for all type of assignments.

College_Year_Studentname_subject_Assesmentname.Ext
E.g. APC_FYBvoc2021_VikasJadhav_Illustrator_LogoDesign.Jpg

Drawings: The Drawing assignments are to be submitted by the student in the form of a journal/file containing individual assignment sheets. Each assignment includes the Assignment Title, Problem statement, Date of submission, Assessment date, Assessment grade and instructor's sign.

BVOC 122	Communication and Personality Development Pres.	Paper- 4 Credits 6

Assessment 1: Communication and Personality Development Pres.

BVOC 124	3d Product pack shot (3d Max, Vray/Arnold)	Paper- 5 Credits 6

(Note: Student can choose their product and animation style. Faculty has to approve storyboard for TVC)

Assessment 1: Modelling product
Assessment 2: Unwrapping product
Assessment 3: Texturing the product
Assessment 4: Studio lighting
Assessment 5: Animating Product
Assessment 6: Adding Dynamic Fx to scene
Assessment 7: Rendering passes/aovs and compositing entire scene
Assessment 8: Product Pack shot Submission

BVOC 136	Hands on Training (Arch. Design walkthrough)	Paper- 6 Credits 6

Assessment 1: Prepare CAD plan for 3d modelling
Assessment 2: Modeling 2bhk house
Assessment 3: Adding Interior props
Assessment 4: Adding Background Element/Dome
Assessment 5: Creating environment around the house
Assessment 6: Shading and Texturing, lighting with vray
Assessment 7: Camera Animation
Assessment 8: Rendering cutouts, sections with vray
Assessment 9: Rendering Final animation with vray
Assessment 10: Arch. Design walkthrough submission. (Less than 30 sec)

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1. Getting ready with pile knowledge of the 3d film making.
2. Getting latest trends, workflows, culture, quality check criteria's and so on.

Outcome

1. Students will explore about field, on floor pipeline and issues and overcome further situation.
2. Explore it infrastructure, deadlines, asset management and management strategies.

Chapter 1	Introduction	2 Hours

1. Production Pipeline Fundamentals for Film and Games
2. How This Book Will Help You
3. What is a Pipeline?
4. Differences and Similarities Between Film and Game Pipelines
5. An Overview of a Film Production
6. An Overview of a Game Production
7. Remember: Each Production is Unique

Chapter 2	The Stages of Production	2 Hours

1. What You Will Learn from This Chapter
2. The Economics of Film Production
3. The Economics of Game Production
4. The Stages of Production
5. Other Language Barriers
6. Pre-Production: An Overview
7. Pre-Production in the Film Pipeline
8. Pre-Production in the Games Pipeline
9. Production: An Overview
10. Production in the Film Pipeline
11. Production in the Games Pipeline

12. Post-Production or Finalling: An Overview
13. Post-Production in the Film Pipeline
14. Finalling in the Games Pipeline

Chapter 3	Asset Creation for Film	2 Hours

1. What You Will Learn from This Chapter
2. LIDAR and On-Set Survey Data
3. Match-Moving, Rotoscoping and Plate Preparation
4. Modeling
5. Shaders and Textures
6. Shot Layout
7. Rigging
8. Animation
9. Effects and Simulations
10. Lighting
11. Rendering
12. Compositing

13. LIDAR: Asset Capture on Set

Chapter 4	Asset Creation for Games	2 Hours

1. Data Import and Export
2. Levels of Detail
3. Optimizing Assets
4. Creating Run-Time Animation
5. In-Game Facial Animation
6. Effects and FX
7. System and Level Design
8. Rendering and Shader Management

Chapter 5	The Basic Functionality of a Pipeline	2 Hours

1. What Pipelines Do
2. Why Pipelines Change
3. Defining Your Goals
4. Defining Standards
5. File-Exchange Formats and Scripting Languages
6. Micro Pipelines
7. Strategies for Managing Data: An Overview
8. Directory Structure
9. File-Naming Conventions
10. Metadata
11. Building an Asset Browser
12. Versioning and Version Control
13. Good Version-Control Policies
14. Asset Review and Approval
15. Tracking Production Data

Chapter 6	Systems Infrastructure	4 Hours

1. IT for Film: Types of Hardware
2. IT for Film: The Storage Cluster
3. IT for Film: The Render Farm
4. IT for Film: Managing the Infrastructure
5. IT for Games: The Build Farm
6. IT for Games: Version Control
7. Managing Operating Systems
8. Managing Utility Software
9. Production Security

Chapter 7	Mitigating Risk Through Regular Maintenance and Disaster Planning	2 Hours

1. Interlude: Planned Downtimes
2. Interlude: General Guidelines
3. Interlude: Regular Maintenance Window
4. Interlude : Incremental Downtime
5. Interlude: Roll-Overs

Chapter 8	Software for a Studio Environment	3 Hours

1. Ours and Theirs: Approaches to Pipeline Software Development
2. When to Build, When to Buy, and When to Tinker
3. Buying In Software: Points to Consider

4. Working with Open-Source Software
5. Scripting and Tinkering
6. Developing Software In-House: the Role of the R&D Department
7. Developing Software In-House: Who to Recruit
8. Developing Software In-House: Development Policy
9. Developing Software In-House: Testing New Tools
10. Developing Software In-House: Developing a Release Policy
11. Developing Software In-House: Producing Documentation
12. Developing Software In-House: Reporting Errors

Chapter 9	**Diving Deeper Into Data Management**	3 Hours

1. What You Will Learn From This Chapter
2. How Data-Management Workflow Evolves
3. Directory Structures: Flat Versus Deep Structures
4. Directory Structures for Film
5. Directory Structures for Games
6. Directory Structures: Designing for Ease of Navigation
7. Directory Structures: Planning Shared Asset Use
8. Directory Structures: Building From Most to Least Generic
9. Directory Structures: Incorporating Asset Templates
10. File-Naming Conventions: Common Syntax
11. File-Naming Conventions: Mirroring the Folder Structure in the File Name
12. Version Control: Exclusive and Non-Exclusive File Access
13. Version Control: Treating Code and Art Assets Separately
14. Version Control: Handling Special Projects
15. Metadata: Embedded Versus Extracted Data
16. Metadata: Flat Files Versus Databases
17. Databases: Relational and Non-Relational Databases
18. Databases: Choosing a Database Structure
19. What is Metadata?

Chapter 10	**Asset Management**	3 Hours

1. What is Asset Management?
2. The Goals of Asset Management
3. How Asset Management Differs Between Film and Games

4. Dependency Tracking: What is Asset Dependency?
5. Dependency Tracking: Upstream and Downstream Dependency
6. Dependency Tracking: Manual Versus Automated Systems
7. Dependency Tracking: Storing Dependency Data
8. Dependency Tracking: Visualizing Dependencies
9. Dependency Tracking: Resolving Implicit Dependencies
10. Dependency Tracking: Caching Queries
11. Dependency Tracking: Grouping Assets

Chapter 10	**Production Management**	3 Hours

1. Production-Management Strategies: Agile Versus Waterfall Development
2. Production-Management Strategies: Maximizing Efficiency
3. Production-Management Strategies: Finishing On Time and On Budget
4. Production-Management Technology: An Overview
5. Production-Management Technology: Tracking Assets
6. Production-Management Technology: Managing Notes
7. Production-Management Technology: Reviewing Work
8. Production-Management Technology: Scheduling Tasks

9. Production-Management: One Final Thought.

Chapter 10	Color and Sound	3 Hours

1. Interlude: Color Management in Workflows
2. Interlude: A Day in the Life of a Motion Picture Sound File, Circa 0
3. Interlude: Audio Differences Between Live Action and Animation
4. Interlude: The Game Audio Pipeline
5. Interlude: Game Audio: D, D, Mono and Stereo
6. Interlude: Audio Flexibility in the Game Environment.

Chapter 10	Tying It All Together	3 Hours

1. Analyze the Business Requirements
2. Process Decisions from Workflow to Mapping the Organization
3. Technical and Infrastructure Decisions
4. The Unique Considerations of Film and Games
5. Building and Proving Pipelines
6. Development Methodologies
7. Further Education.

Chapter 10	Virtual Production in Film and Games	3 Hours

1. What is Virtual Production in Film?
2. Naming Conventions
3. The Standard Phases
4. What is Virtual Production in Games?
5. Virtual Production and Asset Creation/Capture
6. Future

Chapter 10	Upcoming Trends and Technologies	3 Hours

1. Open Standards and Open-Source Tools
2. WebGL and Associated Technologies
3. GPU Computing
4. Big Data

5. Virtual Production
6. High-Frame-Rate Cinema
7. Virtual Machines
8. Games as a Service
9. Pipelines as a Service

Chapter 10	Cloud Computing for VFX	3 Hours

1. Cloud Services
2. Using the Cloud
3. Collaboration

Reference books

- Production Pipeline Fundamentals for Film and Games

Paper-1: Modelling, Texturing

Objective

1. Provides an introduction to creating, editing, and analyzing 3D models. Develops foundational skills to work with, and navigate the digital 3D modeling workspace to create 3D objects. Examines basic elements of the 3D development of modeling, texturing, lighting, animating, and rendering.

Outcome

1. Work with and navigate the unique features of the digital 3D modeling workspace to create 3D objects.
2. Identify characteristics of rendering 3D objects for optimal system processing and analysis.
3. Create a 3D environment featuring lighting and textures.
4. Create basic 3D models and animations.
5. Evaluate digital 3D projects, identify items for improvement, and implement changes.

Chapter 1	Introduction	8Hours

1. Working in Autodesk Maya
2. Color Management
3. Creating and Editing Nodes
4. Creating Maya Projects

Chapter 2	Hard-Surface Modeling	8 Hours

1. Understanding Polygon Geometry
2. Understanding NURBS
3. Using Subdivision Surfaces
4. Employing Image Planes
5. Modeling NURBS Surfaces
6. Converting NURBS Surfaces to Polygons
7. Modeling with Polygons

Chapter 3	Organic Modeling	8 Hours

1. Implement Box Modeling
2. Employ Build-Out Modeling
3. Sculpt Polygons
4. Use Retopology Tools

Chapter 3	Shaders	8 Hours

1. ai user data shaders
2. aov shaders

3. color
4. conversion
5. displacement
6. math shaders
7. matrix shaders
8. maya shaders
9. shading engine
10. surface
11. texture shaders
12. utility shaders
13. volume shaders
14. third party shaders
15. legacy shaders

Chapter 4	UV Texture Layout	8 Hours

1. Bump and Normal Mapping
2. Displacement Mapping
3. Subsurface Scattering
4. ShaderFX

Reference books

- Mastering Autodesk Maya 2016: Autodesk Official Press

Course Type: Core Credit — Course Code: BVOC 126

Paper-3: 3d Design – Rigging, Animation

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE:50 Marks UE:50 Marks

Objective

1) Provides an introduction to creating, editing, and analyzing 3D models. Develops foundational skills to work with, and navigate the digital 3D modeling workspace to create 3D objects. Examines basic elements of the 3D development of modeling, texturing, lighting, animating, and rendering.

Outcome

1) Work with and navigate the unique features of the digital 3D modeling workspace to create 3D objects.
2) Identify characteristics of rendering 3D objects for optimal system processing and analysis.
3) Create a 3D environment featuring lighting and textures.
4) Create basic 3D models and animations.
5) Evaluate digital 3D projects, identify items for improvement, and implement changes.

Chapter 1	Introduction	9 Hours

1. Animation Concepts
2. Step to create animation
3. Drawing Poses
4. Acting for animation

Chapter 2	Animation I	9 Hours

1. Using Joints and Constraints
2. Inverse Kinematics
3. Keyframe Animation
4. The Graph Editor
5. Play blast and FCheck
6. Driven Keys
7. Motion-Path Animation
8. Motion Trails
9. Animating Constraints
10. Animation Layers
11. Grease Pencil
12. Working with Deformers
13. Animating Facial Expressions Using Blend Shapes
14. Animating a Scene Using Nonlinear Deformers
15. Creating a Jiggle Effect
16. Optimizing Animations with the Geometry Cache
17. Applying Motion Capture

Chapter 2	Animation !!	9 Hours

1. Using Joints and Constraints
2. Inverse Kinematics
3. Keyframe Animation
4. The Graph Editor
5. Play blast and FCheck
6. Driven Keys
7. Motion-Path Animation
8. Motion Trails
9. Animating Constraints
10. Animation Layers
11. Grease Pencil
12. Working with Deformers
13. Animating Facial Expressions Using Blend Shapes
14. Animating a Scene Using Nonlinear Deformers
15. Creating a Jiggle Effect
16. Optimizing Animations with the Geometry Cache
17. Applying Motion Capture

Reference books

- Mastering Autodesk Maya 2016: Autodesk Official Press

3d Design - Dynamics

Objective

1. Provides an introduction to creating, editing, and analyzing 3D models. Develops foundational skills to work with, and navigate the digital 3D modeling workspace to create 3D objects. Examines basic elements of the 3D development of modeling, texturing, lighting, animating, and rendering.

Outcome

1. Work with and navigate the unique features of the digital 3D modeling workspace to create 3D objects.
2. Identify characteristics of rendering 3D objects for optimal system processing and analysis.
3. Create a 3D environment featuring lighting and textures.
4. Create basic 3D models and animations.
5. Evaluate digital 3D projects, identify items for improvement, and implement changes.

Chapter 1	Introduction	9 Hours

5. Introducing Dynamics
6. Basic Concept

Chapter 2	nParticles	9 Hours

1. Creating nParticles
2. Making nParticles Collide with nRigids
3. Using nParticles to Simulate Liquids
4. Emitting nParticles Using a Texture
5. Using Wind
6. Shading nParticles and Using Hardware Rendering to Create Flame Effects
7. Controlling nParticles with Fields
8. Rendering Particles with mental ray
9. The Bottom Line
10. Creating a Jiggle Effect
11. Optimizing Animations with the Geometry Cache
12. Applying Motion Capture

Chapter 2	Dynamic Effects	9 Hours

1. Creating nCloth Objects
2. Creating nCloth and nParticle Interactions
3. Soft Body Dynamics

4. Creating Flying Debris Using nParticle Instancing
5. Animating Instances Using nParticle Expressions
6. Bullet Physics.

Chapter 2	Hair and Clothing	9 Hours

1. Understanding XGen
2. Animating Using Dynamic Curves
3. Adding Hair to a Character
4. Styling Hair
5. Rendering Hair
6. Creating Clothing for Characters
7. Painting nCloth Properties

Chapter 2	Maya Fluids	9 Hours

1. Using Fluid Containers
2. Fluid Interactions
3. Igniting the Fuel
4. Rendering Fluid Containers
5. Creating Fluids and nParticle Interactions
6. Creating Water Effects

Reference books

- Mastering Autodesk Maya 2016: Autodesk Official Press

Course Type: Core Credit | Course Code: BVOC 127

Paper 3: 3d Design - Lights, Camera, Render

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50Marks UE: 50 Marks

Objective

1. Provides an introduction to creating, editing, and analyzing 3D models. Develops foundational skills to work with, and navigate the digital 3D modeling workspace to create 3D objects. Examines basic elements of the 3D development of modeling, texturing, lighting, animating, and rendering.

Outcome

1. Work with and navigate the unique features of the digital 3D modeling workspace to create 3D objects.
2. Identify characteristics of rendering 3D objects for optimal system processing and analysis.
3. Create a 3D environment featuring lighting and textures.
4. Create basic 3D models and animations.
5. Evaluate digital 3D projects, identify items for improvement, and implement changes.

Chapter 1	**Introduction to CGI Lighting**	9 Hours

1. Basics of Cinematic Lighting
2. Light Properties
3. Key to Fill Ratio
4. Establishing Emotion
5. Establishing Key
6. Working with Color
7. Character Lighting
8. Review of CG Light Sources
9. 3 Point Setup
10. Basic Maya Rigs
11. IPR

Chapter 2	**Direct Lighting Fundamentals**	9 Hours

1. Direct Lighting Technique
2. Direct Lighting Rigs
3. Light Linking
4. Lighting Interiors
5. Point Arrays
6. Shadow Mapping
7. Color Mapping
8. Incandescence Mapping

9. Shader Glow Blooms
10. OptiFX Review
11. Fogs, Glows, Flares
12. Lighting Exteriors
13. Environment Skies
14. HDR Cheats
15. Global Illumination Terms
16. Mental Ray Review
17. HDR Lighting
18. Physical Sky
19. Photon Mapping
20. Hemispherical Sampling
21. Caustics
22. Subsurface Scattering
23. Portal Light

Chapter 2	Texturing	9 Hours

1. Texturing Fundamentals
2. UV Mapping
3. 3D Texture Painting
4. Texture Nodes- 2D
5. Texture Nodes- 3D
6. Label Mapping
7. Projection Types
8. Animated Maps
9. Mipmaps
10. Mapping Fractal Noise
11. Ramp Texture
12. Layered Textures
13. Environment Textures

Chapter 2	Shaders	9 Hours

1. Basic Shader Review
2. Advanced Shader Review
3. Shader Networks
4. Data Types and Flow
5. Color Mult and Offset
6. Age and Weathering
7. Specular Mapping
8. Rendering Metals
9. Bump and Displacement Mapping
10. Rendering Glass
11. Use Background Shader
12. Utility Nodes
13. Facing Ratio
14. Surface Luminance
15. FX Animation w/ Shaders

Chapter 2	Camera	9 Hours

1. Basic Camera Attributes
2. Perspective Correction
3. Camera Animation Strategies

4. Curve Randomization
5. Shaker Node
6. Tracked Curves
7. Multi-Node Camera Setup
8. Motion Control Rigs
9. Camera Projection

Chapter 2	**Rendering**	9 Hours

1. Rendering by Layer
2. Z-Depth Rendering
3. OpenEXR Format
4. Depth of Field
5. Vector Motion Blur

Reference books

- **Mastering Autodesk Maya 2016: Autodesk Official Press**

Course Type: Core Credit Course Code: BVOC 146

Paper-1: Concept of Visual effects

Teaching Scheme	**No. of Credits**	**Examination Scheme**
4 Hours / Week	2.4	IE: 15 Marks UE: 35 Marks

Objective

1. To get acquainted with core concept and advance vfx preproduction.
2. Learn visual effects production pipeline and in depth look at visual effects and 3d integration pipeline.
3. Explore On set visual effects supervision while shooting live action.
4. Dive into post production process.
5. Be ready with what's now and what's upcoming. Get indulge with all modern technology that is uprising.

Outcome

1. Students will be able to understand the visual effects process at every stage and roles and responsibilities of individuals to create a successful visual effects film.
2. Students will be gaining access to technology required and the future of the technology to develop the process of visual effects.

Guidelines: **Practical's/Assessment/Presentations**

Practical's: Faculty has to take Daily practical of 1 hour each for 30 days.
Presentations: In class/Lab/projector-based presentations along with the submission of the PPT file.
Software Assignments: Student has to submit Master file along with the Jpg version of the same file (1920X1080).
For e.g. A *.**psd** File for **photoshop** assessment along with its **jpg.**
Images/Photography: All Image submission should be 1920X1080 for the respective subject. Photography and digital film making can have 4k or 4k+ resolution.
Videos: All video submission should be 1920X1080 for the respective subject.
Renders: All Rendered submissions should be 1920X1080 for the respective subject.
Naming conventions: File Naming should be in given format for all type of assignments.

College_Year_Studentname_subject_Assesmentname.Ext
E.g. APC_FYBvoc2021_VikasJadhav_Illustrator_LogoDesign.Jpg

Drawings: The Drawing assignments are to be submitted by the student in the form of a journal/file containing individual assignment sheets. Each assignment includes the Assignment Title, Problem statement, Date of submission, Assessment date, Assessment grade and instructor's sign.

BVOC 128	3d Design Assessment's	Paper- 4 Credits 6

3d Design – Modelling, Texturing

1. Assessment: 5 Prop Models
2. Assessment: 1 Organic model
3. Assessment: 1 set model
4. Assessment: 1 automobile model
5. Assessment: Shading and Texturing all above modeling assignments

3d Design - Rigging, Animation

6. Assessment: 1 rigged model
7. 1 path-based animation
8. 1 multiple objects along the path animation

3d Design – Dynamics

9. Assessment: Pouring water with n particles
10. Assessment: Sprite smoke with collision
11. Assessment: Ncloth on character walk cycle
12. Assessment: Soft body assignment 1
13. Assessment: Soft body assignment 2
14. Assessment: Bullet physics rigid body.

3d Design - Lights, Camera, Render

15. Assessment: Camera animation on set (Free move)
16. Assessment: Camera animation on set (on path)
17. Assessment: Lighting interior
18. Assessment: Lighting exterior. Day/night
19. Assessment: Light fog fx.
20. Assessment: Depth of field and motion blur assignments.

BVOC 117	Presentation on Concept of 3d	Paper- 5 Credits 6

Assessment 1: Create a PowerPoint presentation on concept of 3d and present it in class.

BVOC 118	Hands on Training (Project – 3d Animation Film Making)	Paper- 6 Credits 6

Assessment 1: Create a 3d animation film on a given concept. (20 - 30 sec)

Chapter 1	Core Concepts	2 Hours

1. Special Effects or Visual Effects?
2. What Does CGI Really Mean?
3. 2D, 3D, and Stereoscopic 3D
4. Realism and Photorealism
5. The Danger of Over-indulgence
6. Animation, Games, and Visual Effects
7. VFX and the Digital Revolution
8. Digital vs. Film
9. Film vs. Television

Chapter 2	VFX as a Filmmaking Tool	2 Hours

1. Common Types of VFX Shots
2. Fix-it Shots
3. Screen Inserts
4. Rig Removal and Period Cleanup
5. Set Extensions
6. Crowd Tiling/Crowd Simulation
7. Action Elements
8. Advanced VFX

Chapter 3	From 2D to 3D: The Quest for the Lost Dimension	2 Hours

1. Camera Movement and VFX
2. Parallax
3. Perspective Shift
4. 2D Workflow
5. The Missing Dimension
6. Recreating the Camera
7. 3D Workflow
8. 3D vs. 2D
9. 2.5D: The Hybrid Solution
10. Putting It All Together

Chapter 4	Separation: Roto, Green Screens, and the Challenges of Extraction	2 Hours

1. Rotoscoping
2. Green Screen
3. The Challenges of Extraction
4. Background Matching
5. Spill
6. Non-solid Edges

Chapter 5	The VFX Workflow: An In-depth Look at the Various Crafts of Visual Effects	2 Hours

1. Pre-production Crafts

2. Previs
3. Concept Art
4. Camera Tracking
5. Layout
6. Modeling
7. Technical Modeling
8. Organic Modeling
9. Cost-saving Alternatives
10. Texturing and Shading
11. Shaders
12. Textures
13. Rigging
14. Animation
15. Motion Capture
16. Lighting and Rendering
17. CG Lighting Essentials
18. Rendering
19. Compositing
20. Matte Painting
21. Dynamic Simulations
22. Rigid-body Simulations
23. Cloth Simulations
24. Fluid Simulations
25. Particle Systems
26. Crowd Simulation

Chapter 6	**Workflow Case Studies**	4 Hours

1. Shot 1: Background Cleanup
2. Shot 2: The Homestead Strike
3. Shot 3: Piranha Attack

4. Asset Work vs. Shot Work
5. Shot 4: Tsunami Mayhem

Chapter 7	**Pre-production**	2 Hours

1. Preliminary VFX Breakdown
2. The VFX Supervisor and VFX Producer
3. Model 1: Dedicated Production VFX Supervisor and Producer
4. Model 2: Company In-house VFX Supervisor and Producer
5. Preliminary Bidding
6. Inside the Bidding Process
7. Storyboarding
8. Previs and Concept Art
9. VFX Production Meetings
10. Tech Scouts
11. Detailed Budget and Schedule
12. Case Study: Ellis Island

Chapter 8	**On Set**	3 Hours

1. Shooting VFX Elements
2. Camera Movement
3. Camera Angle and Position
4. Lens Type

5. Framing
6. Choosing the Right Background
7. Frame Rate
8. Green Screens
9. Action Coverage
10. Screen Consistency
11. Cast Shadows
12. Tracking Markers
13. Smoke and Atmospherics
14. Reflections
15. Lighting Green Screens
16. Roto or Green Screen?
17. Case Study: The Crane Dare
18. On-set Data Acquisition
19. Camera Information
20. On-set Reference Photography
21. Spherical HDRI Light Domes
22. Lidar 3D Scanning
23. Photogrammetry
24. Crowd Tiling
25. Setting Up the Camera
26. Setting Up the Camera
27. Screen Inserts Setup
28. Stunts and Visual Effects
29. Special Effects and Visual Effects

Chapter 9	Post-production	3 Hours

1. The Post-production VFX Workflow
2. VFX Color Workflow
3. Image and Video Formats

4. Bit Depth
5. Compression
6. Optimal Quality Formats
7. Lower Quality Formats
8. Color Space Demystified
9. ACES Color Space
10. VFX and Editorial
11. The VFX Editor
12. When to Deliver Shots to the VFX Team
13. Handles
14. Edit Refs
15. Editorial Temps
16. Budgeting and Scheduling
17. Budget Updates
18. Change Orders
19. Scheduling
20. The Reviewing Process
21. Mockups
22. Style Frames
23. Play blasts
24. Turntables
25. Comp
26. Final Approval
27. Communication
28. Providing Feedback

Chapter 10	The Future	3 Hours

1. Light field Cinematography
2. Depth-based Separation
3. Per-frame Dense Point Clouds
4. Big Changes Ahead
5. Super-black Materials
6. Real-time Rendering
7. AR, MR, and VR

Reference books

- The Filmmaker's Guide to Visual Effects by Eran Dinur
- The Visual Effects Producer by Charles Finance, Susan Zwerman

Course Type: Core Credit | Course Code: BVOC 131

Paper-1: Introduction to Vfx, Roto and Paint

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1. To create quality artist for matte extractions and paint and cleanup department. Create industry ready skillsets with greater eye for details and quality check attributes.

Outcome

1. Students will be able to understand how to draw and animate shapes with best use of animation blocking.
2. Working with different techniques required for paint and cleanup.
3. Can manage their work with deadlines and client requirements and notes.
4. Greater turnarounds with curies and issues generated into the shots.

Chapter 1	Introduction to silhouette	8Hours

1. Roto Tools
2. Keyboard Shortcuts
3. Creating Spline/Type
4. Editing Controls
5. Timeline Controls
6. Transformation (Object or Sub-Object)
7. Viewer Controls

Chapter 2	origins of Roto	8 Hours

1. Origins of Roto
2. Modern Roto

Chapter 3	Pre-Shot Warm-Up	8 Hours

1. Establish Specifics
2. Shot Length
3. Define the Focus Object
4. Matte Usage
5. Edge and Shape
6. Multiple Shapes
7. Repeating Shapes
8. Positive Space
9. Motion Paths
10. Keying
11. Review

Chapter 3	Key Framing Techniques	8 Hours

1. Timeline Key Framing

2. Bifurcation
3. Incremental Key Frames
4. Motion -Based Roto
5. Approaching the Shot

Chapter 4	Creating Splines, Edge Consistency, Transforms	8 Hours

24. Organizing the Comp
25. Transitioning Between Shapes
26. Transforming shapes

Chapter 5	Quality check shots	8 Hours

1. Multiple Transforms
2. Averaging Tracks
3. Stabilizing Footage
4. Quality check with all matte methods

Chapter 6	Roto and the Human Figure, Human Movement	8 Hours

1. Remember Your Anatomy
2. Isolating Extremities
3. Hands
4. Joints
5. Overlap
6. Fixer Shapes
7. Big Human Movements
8. Subtle Human Movement
9. Tracking and the Human Figure

Chapter 7	Hair, Clothing	8 Hours

1. Base Shapes
2. Standouts
3. Shape Breakdown
4. Consistent Point Placement
5. Secondary Motion

6. Minimum Level of Detail
7. Motion Paths and Motion Blur

Chapter 8	Keeping Focus and Getting Work	8 Hours

1. Bad Habits
2. Estimating a Job
3. Pacing Yourself
4. Getting (and Keeping) a Job

Chapter 9	Introduction to Nuke	8 Hours

1. Components of the Graphic User Interface
2. The Content menu
3. A rundown of the various panels
4. The menu bar
5. The contextual menu

6. Hot keys
7. Nodes
8. Creating a node
9. The Read node
10. The File Browser
11. The Viewer
12. Navigating the Viewer
13. Using the Viewer
14. Viewer inputs
15. Playing a clip in the Viewer

Chapter 10	Working with Process Trees	8 Hours

1. Creating a Simple Process Tree
2. Merging Images
3. Merging remultiplied images
4. Saving Nuke scripts
5. Inserting and Manipulating Nodes in the Tree
6. Inserting, creating, branching, and replacing nodes
7. Connecting nodes
8. Selecting nodes
9. Arranging nodes
10. Disabling and deleting nodes
11. Changing Properties
12. Color correcting the image
13. Using the Properties Bin
14. Adjusting properties, knobs, and sliders
15. Using the Color Wheel and Color Sliders panel
16. Using the Animation menu
17. Rendering
18. Using the Write node
19. Naming file sequences
20. Delving Deeper into the Merge Node
21. Using the Shuffle node
22. Viewing a composite without rendering
23. Creating Animation with Keyframes
24. Indicators on nodes
25. Rendering a new version and comparing
26. Comparing images

Chapter 11	Paint	8 Hours

1. Introducing RotoPaint's Interface
2. Painting strokes
3. Editing strokes
4. Painting in vectors
5. Erasing and deleting strokes
6. Drawing and editing shapes
7. Animating a shape
8. The Curve Editor
9. Painting in Practice
10. Using Paint for wire removal
11. Dust removal with Paint
12. Split-Screening Twins with Roto
13. Combining Paint, Roto, and Animation
14. Compositing with the Key Mix node
15. Working with the Stroke/Shape List window
16. Using the Dope Sheet

Chapter 12	Nuke	8 Hours

1. Components of the Graphic User Interface
2. The Content menu
3. A rundown of the various panels
4. The menu bar
5. The contextual menu
6. Hot keys
7. Nodes
8. Creating a node
9. The Read node
10. The File Browser
11. The Viewer
12. Navigating the Viewer
13. Using the Viewer
14. Viewer inputs
15. Playing a clip in the Viewer

Reference books

- **Getting Started with Nuke**

Course Type: Core Credit

Course Code: BVOC 132

Paper-2: Tracking and Matchmove and Rotomation

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1. Understand camera motion in virtual 3D space and how to accurately model it to reconstruct a scene
2. Understanding of virtual 3D camera principles. know about filming techniques and lenses, including the principles of distortion, parallax and over scan
3. Be skilled at relevant tracking and 3D packages and compositing software
4. Eye for detail: be methodical and highly accurate in your work, paying closing attention to detail and have strong problem-solving skills

Outcome

1. Student will recreate live-action backgrounds (plates) on a computer in a way that mirrors the camera on the set in every way, including lens distortion. They do this by tracking the camera movements to make sure the real and virtual scenes appear from the same perspective.

Chapter 1	Introduction	9 Hours

1. Intro
2. Tracking
3. Matchmove
4. Rotomation

Chapter 2	Types of Matchmoves and Their Uses	9 Hours

1. What Does a Typical Matchmove Task Look Like in the First Place?
2. Planning
3. Gathering Data
4. Building Assets
5. Attacking the Shot
6. What the Computer Thinks About
7. What Kinds of Matchmove Tasks Are There?
8. What Kind of Matchmover Are You?

Chapter 3	What You Need to Know About It, and Why	9 Hours

1. Parts of the Film Camera and How They Work
2. Information Gathering On Set
3. Communication
4. Back at the Office: Information Integration
5. First Steps: Setting Up Your Scene.

Chapter 4	Common Sense and the Mystery Plate	9 Hours

1. You Know More Than You Think You Do
2. Where to Start?
3. The Web Is Your Friend

4. Google Maps
5. Google Earth
6. Building the Set
7. Creating the Camera
8. Lining Up the Shot

Chapter 5	You Have a Video Plate	9 Hours

1. It's a Brave New Digital World
2. What Makes Video Plates So Different?
3. What to Do?
4. And Now, the Results

Chapter 6	Camera Moves Considered	9 Hours

1. Lock off Shots
2. Pan and Tilt Shots
3. Dolly (Truck) and Tracking Shots
4. Crane Shots
5. Steadicam and Handheld Shots
6. Focus Pulls and Zooms

Chapter 7	Real-Life Shot: Lockoff Camera	9 Hours

1. Determine What Needs to Be Done
2. Review Your Information
3. Set Up Your Shot
4. Does It Make Sense?

Chapter 8	Camera Moves Considered	9 Hours

1. Lock off Shots
2. Pan and Tilt Shots
3. Dolly (Truck) and Tracking Shots
4. Crane Shots
5. Steadicam and Handheld Shots
6. Focus Pulls and Zooms

Chapter 9	Real-Life Shot: Focus Pull	9 Hours

1. Determine What Needs to Be Done
2. Review Your Information
3. Color-Correct Your Plates
4. Set Up the Scene
5. 2D Track
6. Survey Constraints
7. 3D Solve
8. Does It Make Sense?
9. Evaluation

Chapter 10	Real-Life Shot: Camera Tilt	9 Hours

1. Determine What Needs to Be Done
2. Review Your Information

3. Set Up Your Shot
4. 2D Track
5. Survey Constraints
6. 3D Solve

7. Handoff
8. Adding Guestimate Geometry
9. Evaluation

Chapter 11	**Real-Life Shot: Handheld Camera**	9 Hours

1. Determine What Needs to Be Done
2. Review the Information
3. Set Up the Shot
4. 2D Tracking
5. 3D Solve
6. Refining the Solution Channels
7. One-Point Solve

Chapter 12	**Character Rotomation Considered**	9 Hours

1. First Off: What's Roto for?
2. How Do You Start?
3. Great, I Got a Rig. And I'm Scared
4. Rotomation First Pass: Animating Large to Small
5. Rotamating Dos and Donts
6. Which Channels to Key and When to Key Them
7. Finding the Next Set of Keyframes
8. Set, Delete, Set

Chapter 13	**Know Your Character Rig**	9 Hours

1. Embrace Your Inner Rotomator
2. Getting to Know You
3. Let's Meet Our Rig
4. Control: Master (World)
5. Control: Body
6. Control: COG (Center of Gravity)
7. Control: Hips
8. Control: Spine
9. Control: Neck
10. Control: Head
11. Control: Shoulders
12. Control: Arms
13. Control: Elbow
14. Control: Legs
15. Control: Leg, Pivot, and Roll
16. Control: Knees
17. Control: Fingers
18. You're Almost Ready to Start
19. Next Up

Chapter 14	**Real-Life Shot: Character and Object Rotomation**	9 Hours

1. Determine What Needs to Be Done
2. Part 1: Character Rotomation

3. Breaking Down the Clip
4. Hip Close Up
5. First-Pass Rotomation: Walking
6. First-Pass Rotomation: Sitting
7. Second-Pass Rotomation

8. Shot Part 2: Cup Rotomation
9. Constraining the Prop Cup
10. Animating Constraints On and Off
11. Animating the Cup Trajectory
12. Keeping Track of Cylindrical Spinning
13. First Pass Over the Pool
14. Finishing UpSet, Delete, Set

Reference books

- The invisible art of camera by Wiley
- The Art and Technique of Match moving by Erica Hornung

Course Type: Core Credit | Course Code: BVOC 133

Paper-3: **Green screen And Matte Paint and Compositing**

Teaching Scheme	No. of Credits	Examination Scheme
4 Hours / Week	4	IE: 50 Marks UE: 50 Marks

Objective

1. understand the principles of composition, and creating detailed thumbnail sketches. You'll then learn to take your sketches and build upon them with basic photo bashing techniques to give quick life to your first matte painting.
2. Create perfect mattes from green/blue screen footage.

Outcome

1. integrating photos from different sources into a single piece, and how to give them a consistent look and feel.
2. Use advanced Photoshop techniques to achieve seamless color, atmosphere, and lighting effects to finish your matte painting.
3. To use multiple keying approaches that will prepare you for any shot, and the various challenges that inevitably arise. to
4. Fix problems, such as preserving hair detail and removing color spill from process screens. Color spill is almost always a problem and dealing with it is one of the most important aspects of integrating your process screen elements into a shot.

Chapter 1	Introduction	4 Hours

1. Introduction to Keying
2. Breaking downs parts
3. In matte out mattes
4. Spill, Edge refinements
5. Alpha

Chapter 2	Keying	9 Hours

1. Introducing Nuke's Keying Nodes
2. HueKeyer
3. The IBK: Image Based Keyer
4. Keylight
5. Combining Keyer Nodes Using the Tree
6. Erode, Dilate, and Erode
7. Spill suppressing with HueCorrect

Chapter 2	Grading	5 Hours

1. Understanding Nuke's Approach to Color
2. Color Manipulation Building Blocks
3. Dynamic range
4. Using an I/O Graph to Visualize Color Operations
5. Creating Curves with ColorLookup
6. Color Matching with the Grade Node
7. Using the Grade node
8. Using CurveTool to match black and white points
9. Matching midtones by eye
10. Achieving a "Look" with the ColorCorrect Node
11. Using the ColorCorrect node
12. Using the mask input to color correct a portion of the image

Chapter 2	Matte paint	9 Hours

16. Creating concept with photoshop
17. Working with live action
18. Working completely from scratch
19. Collecting asset
20. Resolutions and technical requirements
21. Concept approvals
22. Refining
23. Color correction
24. Channel compositing
25. Atmospheric elements
26. finalizing

Chapter 2	Camera Projection	9 Hours

1. Camera Projection
2. Building a Camera Projection Scene
3. Tweaking the Geometry
4. Animating the Camera
5. Tweaking the Texture
6. Using a Spherical Transform to Replace Sky

7. Compositing Outside the Scanline Render Node
8. Cloning nodes
9. Final adjustments
10. D Compositing Inside D Scenes
11. Importing Photoshop layers
12. Creating the frame
13. Compositing the screen into the D scene
14. Rendering the Scene

Reference books

- **Getting Started with Nuke**
- **Nuke 101**

Paper-5: Compositing

Objective

1. To create the final image of a frame, shot or VFX sequence. They take all the different digital materials used (assets), such as computer-generated (CG) images, live action footage and matte paintings, and combine them to appear as one cohesive image and shot.

Outcome

2. Consider visual aspects of a scene.
3. They relight in order to improve the look of the image
4. Learn to makes an image appear realistic in terms of light, color, composition and perspective
5. Understand cameras, cinematography and how films colors.

Chapter 1	**The Composite**	9 Hours

1. Premultiply vs Unpremultiply
2. Premultiply
3. Unpremultiply
4. The Double Premultiply
5. The Composite
6. The Over Composite
7. The KeyMix Composite
8. The AddMix Composite
9. How It Works
10. How to Build It
11. How to Use It
12. The Processed Foreground Method
13. The Workflow
14. What to Watch Out For
15. Compositing With a Keyer

16. Soft Comp/Hard Comp
17. “Cut and Paste” Keyer Compositing
18. Compositing Outside the Keyer
19. The Single Key
20. The Uberkey
21. Soft Key/Hard Key
22. The Additive Keyer
23. Stereo Compositing
24. Anaglyph
25. Stereopsis
26. Stereoscopy
27. The Stereo Conversion Process
28. Depth Grading
29. Scene Transition
30. The Dashboard Effect
31. Window Violation
32. Miniaturization
33. Divergence
34. Stereo Compositing
35. Dual View Display
36. Split and Join Views
37. Disparity Maps

Chapter 2	**Compositing CGI**	9 Hours

1. Multi-pass CGI Compositing
2. Process Verification for Your Renderer
3. Render Passes
4. Lighting Passes
5. Render Passes Workflow
6. Beauty Pass Workflow
7. AOVs
8. ID Passes
9. Normals Relighting
10. EXR File Format
11. Film Scans
12. Linear Lightspace
13. Arbitrary Image Channels
14. HDR Images
15. Deep Compositing
16. Deep Images
17. The Layering Complexity Problem
18. The Depth Compositing Edge Problem
19. The Re-rendering Problem
20. Deep Compositing with Live Action

Chapter 3	**D Compositing**	9 Hours

1. A Short Course in D
2. The D Coordinate System
3. Vertices
4. Meshes
5. Surface Normals
6. UV Coordinates
7. Map Projection
8. UV Projection

66. Matching Color
67. Grayscale Balancing
68. Flesh Tones
69. The “Constant Green” Method of Color Correction
70. Daylight
71. Specular Highlights
72. Lighting Direction
73. Quality of Light Sources
74. Creating Softer Lighting
75. Creating Harsher Lighting
76. Non-linear Gradients for Color Correction
77. The DI Process
78. A Checklist

Chapter 4	Sweetening the Comp	9 Hours

1. Layer Integration
2. Interactive Lighting
3. Edge Blending
4. Light Wrap
5. Creating Shadows
6. Edge Characteristics
7. Density
8. Color
9. Faux Shadows
10. Shadow Warping
11. Contact Shadows
12. Atmospheric Haze
13. Adding a Glow
14. Grain Management
15. Grain Characteristics
16. Regraining Techniques
17. Regrain Tool
18. Lifted Grain
19. Grain Rescue
20. Grain Management Workflows
21. Live Over Live
22. Live Over CGI
23. CGI Over Live
24. CGI Over CGI
25. Still Photos
26. Managing Clipping

Chapter 5	Camera Effects	9 Hours

1. Lens Effects
2. Lens Distortion
3. Depth of Field
4. Vignetting
5. Lens Defects
6. Spherical Aberration
7. Astigmatism
8. Chromatic Aberration
9. Glows and Flares
10. Lens Flare
11. Lens Filter Flare

12. Diffraction Glows
13. Veiling Glare
14. Grain
15. Lens Distortion Workflows
16. CGI Over Live Action
17. Live Action Over CGI
18. CGI Over CGI
19. Live Action Over Live Action
20. Matching the Focus
21. Using a Blur for Defocus
22. How to Simulate a Defocus
23. Sharpening
24. Sharpening Operations
25. Unsharp Masks
26. Making Your Own Unsharp Mask
27. Rolling Shutter
28. PART III THINGS YOU SHOULD KNOW
29. Chapter – Digital Color
30. Color Spaces
31. Primary Chromaticities
32. Units of Measure
33. Transfer Function
34. Gamut
35. HSV and HSL
36. Log and Linear
37. Working in Linear
38. What Exactly Is Linear?
39. Color Operations
40. Transformations and Filtering
41. CGI
42. Metadata
43. OpenColorIO
44. ACES Color Management
45. The ACES Workflow
46. The ACES Gamut
47. What About Video Productions?

Chapter 6	**Image Blending**	9 Hours

1. Image Blending in Linear Light Space
2. Image-blending Operations
3. Compositing Operations
4. Matching the Look of sRGB in Linear
5. All sRGB Color Space
6. sRGB Within Linear
7. Alpha Compositing Operations
8. Image-blending Operations
9. The Screen Operation
10. Adjusting the Appearance
11. The Weighted Screen Operation
12. Multiply
13. Adjusting the Appearance
14. Maximum
15. Minimum
16. Absolute Difference
17. Adobe Photoshop Blending Modes
18. Simple Blending Modes

19. Complex Blending Modes
20. Slot Gags
21. Retiming Clips
22. Constant Speed Changes
23. Variable Speed Changes
24. Interpolation Methods
25. Nearest Neighbor
26. Frame Average
27. Motion Estimation
28. VR Stitching
29. Workflow Overview
30. Removing Lens Distortion
31. Building a Matching Computer Rig
32. Projecting Onto the Panosphere
33. The Stitching Process
34. Coping with Parallax
35. Exposure Correction
36. Visual Effects

Chapter 4	Sweetening the Comp	9 Hours

1. Layer Integration
2. Interactive Lighting
3. Edge Blending
4. Light Wrap
5. Creating Shadows
6. Edge Characteristics
7. Density
8. Color
9. Faux Shadows
10. Shadow Warping
11. Contact Shadows
12. Atmospheric Haze
13. Adding a Glow
14. Grain Management
15. Grain Characteristics
16. Regraining Techniques
17. Regrain Tool
18. Lifted Grain
19. Grain Rescue
20. Grain Management Workflows
21. Live Over Live
22. Live Over CGI
23. CGI Over Live
24. CGI Over CGI
25. Still Photos
26. Managing Clipping

Reference books

- Digital Compositing for Film and Video, 4th Edition

Guidelines: **Practical's/Assessment/Presentations**

Practical's: Faculty has to take Daily practical of 1 hour each for 30 days.
Presentations: In class/Lab/projector-based presentations along with the submission of the PPT file.
Software Assignments: Student has to submit Master file along with the Jpg version of the same file (1920X1080).
For e.g. A *.**psd** File for **photoshop** assessment along with its **jpg.**
Images/Photography: All Image submission should be 1920X1080 for the respective subject. Photography and digital film making can have 4k or 4k+ resolution.
Videos: All video submission should be 1920X1080 for the respective subject.
Renders: All Rendered submissions should be 1920X1080 for the respective subject.
Naming conventions: File Naming should be in given format for all type of assignments.

College_Year_Studentname_subject_Assesmentname.Ext
E.g. APC_FYBvoc2021_VikasJadhav_Illustrator_LogoDesign.Jpg

Drawings: The Drawing assignments are to be submitted by the student in the form of a journal/file containing individual assignment sheets. Each assignment includes the Assignment Title, Problem statement, Date of submission, Assessment date, Assessment grade and instructor's sign.

BVOC 134	Visual FX Assessment	Paper- 4 Credits 6

Roto Paint
Assessment 1: Basic roto with props **(Boris Fx silhouette)**
Assessment 2: Roto with human Body
Assessment 3: Roto with Motion Blur
Assessment 4: Roto with Hairs
Assessment 5: Roto with Cloth
Assessment 6: Merge Operations **Nuke**
Assessment 7: Silhouette to nuke roto export
Assessment 8: Clean plate with 2d Track
Assessment 9: Clean plate with Projection
Assessment 10: Sequence paint Manual

Tracking, Matchmove and Rotomation
Assessment 1: Tracking with tripod and match move in Maya
Assessment 1: Tracking with Free move and match move
Assessment 1: Tracking with Undistort and match move
Assessment 1: Camera+Object track and match move
Assessment 1: Camera+Bodytrack and match move

Greenscreen, Matte painting
Assessment 1: Greenscreen 1
Assessment 1: Greenscreen 2
Assessment 1: Greenscreen 3
Assessment 1: Matte paint with Photoshop
Assessment 1: Projection of 2d+3d matte paint in nuke

Compositing
Assessment 1: 2d Element Compositing
Assessment 1: 2d3d Element Compositing with passes
Assessment 1: Green screen composite in nuke
Assessment 1: matte paint composite in nuke

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BVOC 135	Green Screen Shoot Outdoor/indoor Practical	Paper- 5 Credits 6
Assessment 1: An Outdoor/indoor Shoot for 5 different Themes Create a PowerPoint presentation on visual Fx Production pipeline		
BVOC 136	Hands on Training (Project – VFX Film Making)	Paper- 6 Credits 6
Assessment 1: Create a short visual effect film on a given concept.		