



Savitribai Phule Pune University  
Skill Development Centre

BACHELOR 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 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
<b>TOTAL</b>			<b>285</b>	<b>3</b>	<b>3</b>	<b>30</b>

### 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
<b>TOTAL</b>			<b>285</b>	<b>3</b>	<b>3</b>	<b>30</b>

Course Type: Core Credit		Course Code: BVOC 113
<b>Paper-1: Preproduction</b>		
<b>Teaching Scheme</b> 3 Hours / Week	<b>No. of Credits</b> 4	<b>Examination Scheme</b> IE: 50 Marks UE: 50 Marks
<p><b>Objective</b></p> <ol style="list-style-type: none"> <li>1) To understand, explore and learn the art of pencil drawing. To learn the toning and shading of different grade of professional sketching pencils.</li> <li>2) Learn the method of using different grade of pencil to do sketching, shading and toning.</li> <li>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.</li> <li>4) Explore the use of pencil and various tools to create textures for different subjects.</li> <li>5) Learn how to be creative in use of pencil for drawing and expression</li> </ol>		
<p><b>Outcome</b></p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>		
Chapter 1	<b>Introduction to drawing for animation</b>	2 Hours
<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. The sketchbook</li> <li>3. About the author: The bohemian on the bus</li> <li>4. Focal points</li> <li>5. From scribbles to signs: the confidence</li> <li>6. of a child</li> <li>7. The big three: the square, circle and triangle</li> <li>8. Overlapping shapes</li> <li>9.</li> </ol>		
Chapter 2	<b>Depth and shading</b>	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	<b>1.The History of Storyboards</b>	2 Hours
<ol style="list-style-type: none"><li>6. Early Storyboards</li><li>7. Storyboards from the Disney Studio</li><li>8. Plane Crazy (1928)</li><li>9. Who Hires Storyboard Artists?</li><li>10. Independent Contractors vs Staffers</li><li>11. Staffers</li><li>12. Independent Contractors (aka Freelancers)</li></ol>		
Chapter 2	<b>Visual Literacy</b>	2 Hours
<ol style="list-style-type: none"><li>7. Screen Reference</li><li>8. The Story Point</li><li>9. Emotional Response</li><li>10. Visual Appeal</li><li>11. Composition within Your Picture Frame</li><li>12. Working with Shapes</li><li>13. Lines</li><li>14. The Rule of Thirds</li><li>15. Design of the Shapes</li><li>16. Focal Point</li><li>17. Depth</li><li>18. Perspective</li><li>19. Contrast</li><li>20. Foreground, Middle Ground, and Background</li><li>21. Overlapping Forms</li><li>22. Change in Size</li></ol>		
Chapter 3	<b>Drawing for Storyboards</b>	2 Hours
<ol style="list-style-type: none"><li>13. Your Drawing Alphabet: SICO Shapes</li><li>14. S-Curves</li></ol>		

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	<b>Story Structure</b>	2 Hours
<ol style="list-style-type: none"> <li>4. What Is a Story?</li> <li>5. Story</li> <li>6. Protagonist</li> <li>7. Motivation</li> <li>8. Conflict</li> <li>9. Antagonist</li> <li>10. Inciting Incident</li> <li>11. Plot</li> <li>12. Climax</li> <li>13. Resolution</li> <li>14. Story Charts</li> <li>15. Incorporating Design in Your Scenes</li> <li>16. Rhythm</li> <li>17. Choice</li> <li>18. Juxtaposition of Shots</li> <li>19. Secondary Action</li> <li>20. Use Depth to Support Your Staging</li> </ol>		
Chapter 6	<b>Storyboard Types</b>	4 Hours
<ol style="list-style-type: none"> <li>1. Beat Boards</li> <li>2. Continuity Boards/Shooting Boards</li> <li>3. Live Action Boards</li> <li>4. Feature Animation Boards</li> <li>5. Advertising Storyboards/Pitch Boards</li> <li>6. TV Animation Boards</li> <li>7. Video Game Storyboards</li> <li>8. Previs</li> </ol>		
Chapter 7	<b>Storyboarding</b>	2 Hours
<ol style="list-style-type: none"> <li>1. The Storyboard Process</li> <li>2. Script Analysis</li> <li>3. Fulfilling the Story Point</li> <li>4. Subtext</li> <li>5. Thumbnails</li> <li>6. Starting Your Rough</li> <li>7. Double Check Your Work</li> <li>8. Finished Storyboards</li> <li>9. Digital Storyboards</li> <li>10. Checklist for Identifying Common Mistakes</li> </ol>		
Chapter 8	<b>Advanced Storyboard Techniques</b>	3 Hours
<ol style="list-style-type: none"> <li>1. Creating Efficiency</li> <li>2. Complex Camera Moves</li> <li>3. Transitions</li> <li>4. Visual Transitions</li>   <li>5. Story Point Transitions</li> <li>6. Audio Transitions</li> <li>7. Effects Transitions</li> <li>8. Cutting Styles</li> <li>9. Creative Dialogue</li> <li>10. Creative Screen Direction</li> </ol>		

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**

<b>Teaching Scheme</b>	<b>No. of Credits</b>	<b>Examination Scheme</b>
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	<b>Building Puppets</b>	12 Hours
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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	<b>Digital Cinematography</b>	6 Hours
<ol style="list-style-type: none"> <li>1. Digital Camera Basics</li> <li>2. ISO</li> <li>3. Aperture and Shutter Speed</li> <li>4. Depth of Field</li> <li>5. White Balance</li> <li>6. Camera Effects</li> <li>7. Rack Focus</li> <li>8. Blurring Effects</li> <li>9. Camera Moves</li> <li>10. Stereoscopic Photography</li> </ol>		
Chapter 3	<b>Character Animation</b>	10 Hours
<ol style="list-style-type: none"> <li>1. Animation Technique</li> <li>2. Timing</li> <li>3. Arcs</li> <li>4. Overlapping Action</li> <li>5. Anticipation</li> <li>6. Performance</li> <li>7. Two-Character Dialogue</li> <li>8. Lip Sync</li> </ol>		
Chapter 4	<b>Visual Effects</b>	8 Hours
<ol style="list-style-type: none"> <li>1. Film Compositing</li> <li>2. Digital Compositing</li> <li>3. Split-Screen and Masks</li> <li>4. Blue/Green Screen</li> <li>5. Front Light/Back Light</li> <li>6. Advanced Compositing for Ava</li> <li>7. Effects</li> <li>8. Rig and Shadow Removal</li>   <li>9. Motion Blur</li> </ol>		
<b>Reference books</b>		
<ul style="list-style-type: none"> <li>➤ The advance art of stop motion animation By Ken A Priebe</li> <li>➤ The art of stop motion animation By Ken A Priebe</li> </ul>		

Course Type: Core Credit	<b>Paper-3: 2d Animation - Adobe Animate</b>	Course Code: BVOC 115
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Teaching Scheme 3 Hours / Week	No. of Credits 4	Examination Scheme IE: 50 Marks UE: 50 Marks
<p><b>Objective</b></p> <ol style="list-style-type: none"> <li>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.</li> <li>2) Developing concepts, storyboarding and production of several 2-dimensional animations will be accomplished.</li> </ol>		
<p><b>Outcome</b></p> <ol style="list-style-type: none"> <li>1) Development of strong drawing, composition, anatomy, color and perspective skills.</li> <li>2) knowledge of animation fundamentals and believability in motion, timing and structure.</li> </ol>		
Chapter 1	<b>GETTING ACQUAINTED</b>	2 Hours
<ol style="list-style-type: none"> <li>1. Starting Adobe Animate CC and Opening a File</li> <li>2. Understanding Document Types</li> <li>3. Getting to Know the Workspace</li> <li>4. Working with the Library Panel</li> <li>5. Understanding the Timeline</li> <li>6. Organizing Layers in a Timeline</li> <li>7. Using the Properties Panel</li> <li>8. Using the Tools Panel</li> <li>9. Undoing Steps in Animate</li> <li>10. Previewing Your Movie</li> <li>11. Modifying the Content and Stage</li> <li>12. Saving Your Movie</li> </ol>		
Chapter 2	<b>CREATING GRAPHICS AND TEXT</b>	2 Hours
<ol style="list-style-type: none"> <li>1. Understanding Strokes and Fills</li> <li>2. Creating Shapes</li> <li>3. Making Selections</li> <li>4. Editing Shapes</li> <li>5. Using Gradient and Bitmap Fills</li> <li>6. Using Variable-Width Strokes</li> <li>7. Using Swatches and Tagged Swatches</li> <li>8. Creating Curves</li> <li>9. Using Transparency to Create Depth</li> <li>10. Being Expressive with the Paint Brush</li> <li>11. Creating and Editing Text</li> <li>12. Aligning and Distributing Objects</li> <li>13. Converting and Exporting Art</li> </ol>		
Chapter 3	<b>CREATING AND EDITING SYMBOLS</b>	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	<b>NATURAL AND CHARACTER ANIMATION</b>	2 Hours
<ol style="list-style-type: none"> <li>1. Natural Motion and Character Animation with Inverse Kinematics</li> <li>2. Creating a Walk Cycle</li> <li>3. Disabling and Constraining Joints</li> <li>4. Inverse Kinematics with Shapes</li> <li>5. Simulating Physics with Springiness</li> </ol>		
Chapter 8	<b>CREATING INTERACTIVE NAVIGATION</b>	3 Hours
<ol style="list-style-type: none"> <li>1. About Interactive Movies</li> <li>2. Creating Buttons</li> <li>3. Understanding ActionScript 3.0</li> <li>4. Preparing the Timeline</li> <li>5. Adding a Stop Action</li> <li>6. Creating Event Handlers for Buttons</li> <li>7. Creating Destination Keyframes</li> <li>8. Creating a Home Button Using Code Snippets</li> <li>9. Code Snippets Options</li> <li>10. Playing Animation at the Destination</li> <li>11. Animated Buttons</li> <li>12.</li> </ol>		
Chapter 9	<b>WORKING WITH SOUND AND VIDEO</b>	3 Hours
<ol style="list-style-type: none"> <li>1. Understanding the Project File</li> <li>2. Using Sounds</li> <li>3. Understanding Video</li> <li>4. Using Adobe Media Encoder CC</li> <li>5. Playback of External Video in Your Project</li> <li>6. Working with Video and Transparency</li> <li>7. Embedding Video</li> <li>8.</li> </ol>		
Chapter 10	<b>PUBLISHING</b>	3 Hours
<ol style="list-style-type: none"> <li>1. Understanding Publishing</li> <li>2. Publishing for Flash Player</li> <li>3. Publishing for HTML5</li> <li>4. Using Classic Tweens</li> <li>5. Exporting to HTML5</li> <li>6. Inserting JavaScript</li> <li>7. Converting to HTML5 Canvas</li> <li>8. Publishing a Desktop Application</li> <li>9. Publishing to Mobile Devices</li> </ol>		
<b>Reference books</b>		
<p>➤ <a href="#">Adobe Animate CC Classroom in a book</a></p>		

## 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.

**Renderers:** 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 thin. 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
<p><b>Assessment 1:</b> 2d Animation Project of 20 second. Concepts can be decided by student. <b>Assessment 1:</b> Create a PowerPoint presentation of Concept of Animation content and present it to class.</p>		
BVOC 118	Hands on Training (Project – 2D/stop Motion Animation)	Paper- 6 Credits 6
<p><b>Assessment 1:</b> Create a 2d /stop motion project of minimum 20 sec and maximum of 30 sec.</p>		



Course Type: Core Credit		Course Code: BVOC 119
<b>Paper-1: Communication and Personality Development</b>		
<b>Teaching Scheme</b> 3 Hours / Week	<b>No. of Credits</b> 4	<b>Examination Scheme</b> IE: 50 Marks UE: 50 Marks
<p><b>Objective</b></p> <ol style="list-style-type: none"> <li>To develop effective communication</li> <li>To Practice reading and writing skills.</li> <li>Creation of talented artist with skills to develop organizational and routine values</li> </ol>		
<p><b>Outcome</b></p> <ol style="list-style-type: none"> <li>Student will able to use their skills in better understanding of work as well as their product.</li> <li>Student will effectively communicate and participate the quality value in development of a pipeline.</li> </ol>		
Chapter 1	<b>Profile of an Effective Communicator</b>	1 Hours
<ol style="list-style-type: none"> <li>An Analysis of the Case</li> <li>Review Your learning</li> <li>Endnote</li> </ol>		
Chapter 2	<b>Theatre Technique for Effective Communication and Personality Development</b>	2 Hours
<ol style="list-style-type: none"> <li>What is the Theatre?</li> <li>What is a Play?</li> <li>Story</li> <li>Six Stages of Play</li> <li>Issues</li> <li>Theatre and Communication Skills</li> <li>Theatre Technique</li> <li>What is Personality?</li> <li>Objectives</li> <li>Pedagogy</li> <li>Areas Covered</li> <li>Business Communication</li> <li>Interpersonal Communication</li> <li>Oral Communication</li> <li>Written Communication</li> <li>Body Language</li> <li>Interpersonal Relations</li> </ol>		

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: MHA1
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

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

**Teaching Scheme**  
3 Hours / Week

**No. of Credits**  
4

**Examination Scheme**  
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. MultiMaterial, 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**  
3 Hours / Week

**No. of Credits**  
4

**Examination Scheme**  
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. Water Droplets
11. Splash
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



## 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.

**Renderers:** 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
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**Assessment 1:** Communication and Personality Development Pres.

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