VOCATIONAL COURSE
ON
BASICS OF 3D ANIMATION

SUMMARY	
Nodal Dept. of HEI	Drawing and Painting Dept., Jagran College of Art, Science & Commerce
Programme	Basics of 3D Animation
Duration	6 Months /75 Hours
Aligned NSQF LEVEL	Foundation
Job Prospects	Animator, Story Board Artist
Credits	
Minimum Credits Required for Certificate	3
Nature of Course	Progressive

Introduction:

The Basics of Animation is a 6 Month program. The course covers basics techniques in 3D Animation and Design. By the end of the course you will be able to create a 3D Animation Video.
After completing the program successfully student will be able to:
- Demonstrate techniques of 3D Animation
- Understand the production pipeline
- Work with high end 3D software .
- Produce work portfolio for employer engagement

S. No	Course Name	Lectures T	Lectures P	Credits
1	Drawing and Concept of 3D Animation	15	0	1
2	Concept of 3D Animation with Maya-Lab	0	30	1
3	3D Animation Production Process and Project Development	0	30	1
		15	60	3

Basics of 3D Animation , Drawing and concept of 3D Animation (THEORY)	T-15 C-1

On completion of the course, the students will be :

- Understanding the techniques of drawing for animation

- Understanding the drawing techniques of backgrounds and it's elements for animation movies

- Applying the human anatomy study for the movements.

- Applying the Anatomy study on cartoons and child character drawing

Course Content:

Unit I: An introduction of how to make drawings for animation, shapes and forms, About 2D and 3D drawings, Life drawing, Caricaturing-fundamentals, Exaggeration, Silhouette	3 Hours
Unit II: Background elements, trees, mountains, clouds, water bodies, meadows, buildings, science fiction story backgrounds, backgrounds of mythological stories perspective drawing Lights and shadows day night scenes.	3 Hours

Unit III: Structure of male and female body, comparative study of male and female body. Body parts:- Head, Torso, hands, legs, foot and palm. Face:- Different elements of face and their distribution on face. Study of mouth, nose, eyes and ears.	4 Hours
Unit IV: Child and cartoon study- Understanding child's figure, proportion and construction of child body, face, chubbiness, hand, feet and gestures. Understanding cartoon characters, drawing from basic shapes, line of action, distortion of proportion, cartoon faces, eyes, mouths, hairs, nose, hands, feet, gestures and poses.	5 Hours
Text Books: A handbook of Perspective-Stephen M. Ship Reference Books: Human anatomy by-Victor Ferard 2.Figure drawing made easy by-Aditya Chari 3.Cartoons- Persten Blair	
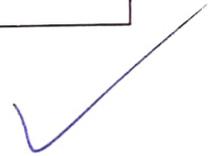
Basics of 3D Animation Semester-I Concept of 3D Animation with Maya-Lab (PRACTICAL)	P-30, C-1
On completion of the course, the students will be:	
• Understanding about basic principles of animation.	
• Understanding the animation Maya, they practice to apply various animation principles and learn different tools for Animation in Maya	
• Analyzing the various techniques of Animation in Maya	
• Applying the various technique and tools	

Course Content	
Unit I: Introduction to animation principal (12 basic principal), Understanding different types of Experimental animation. Understanding the animation in Maya and practice to apply various animation principles and learn different tools for Animation in Maya.	4 Hours
Unit II: Animation tools in 3D, "Applying animation techniques". Overview of Maya's playback controls, Exploring maya's animation preferences. Details about graph editor, Bouncing Ball Exercise, Body language.	4 Hours
Unit III: Animating object along a motion path, Utilizing the trax-editor to blend animation clips. Controlling attributes with set driven keys, Animating with constraints, Previewing animations in real-time with play blasts, Introduction to scene animation and key framing.	8 Hours
Unit IV: -Make various expressions of models and use them for blend shapes. -Make different kinds of biped walk (Happy, Sad, Attitude and Tiptop) -Create run, jump, skid animations. -Make animations of coin drop, ball bounce, path animation.	14 Hours
Text Books: Survival kit for animators -Sir Willium Richards Mastering Autodesk Maya 2018 by Eric Keller	
Reference Books1. Introducing Maya 2018 by Dariush Derakhshani. * Latest editions of all the suggested books are recommended.	

Basics of 3D Animation Semester-I 3D Animation Production Process and Project Development(PRACTICAL)	L-0 T-0 P-30 C-1
On completion of the course, the students will be :	
• Understanding various departments of 3D animation studio and understanding pre production pipeline for using story, script, character designing, background and layouts, staging Storyboarding, voice over, Background audio, animatic.	
• Applying the production process pipeline for character animation and post production pipeline used for rendering in 3D animation.	
• Applying the various types of 3D animation tool and techniques to create project and creating animated video uses various 3D animation tools.	

Course content	
Unit I : Introduction to animation principal (12 basic principal), Understanding different types of Experimental animation and practice to apply various animation principles and learn different tools for Animation in Maya.	5 Hours
Unit II :Animation tools in 3D, "Applying animation techniques". Overview of Maya's playback controls, Exploring maya's animation preferences. Details about graph editor, Bouncing Ball Exercise, Body language.	5 Hours
Unit III: Utilizing the trax-editor to blend animation clips. Controlling attributes with set driven keys, Animating with constraints, Previewing animations in real-time with play blasts, Introduction to scene animation and key framing.	5 Hours
Unit IV Make an animation of a character walking in street he pick up some object and throw it. Make various expressions of models and use them for blend shapes. Make different kinds of biped walk (Happy, Sad, Attitude and Tiptop) Create run, jump, skid animations. Make animations of coin drop, ball bounce, path animation	15 Hours
Text books :Survival kit for animators -Sir Willium Richards Mastering Autodesk Maya 2018 by Eric Keller	
Reference books :1.Introducing Maya 2018 by Dariush Derakhshani. 2.The 3D production Pipeline by Fabio Pellacini	