SILVER OAK UNIVERSITY

School of Technology, Design and Computer Application

Silver Oak College of Computer Application

Bachelor of Science Computer Science & Information Technology

Course Name: Multimedia VFX-CO-1

Course Code: 3040003283

Semester: 4th

Prerequisite: - Prerequisites for this course may include basic knowledge of computer operations, familiarity with digital imaging concepts, and a fundamental understanding of animation principles.

Course Objective: Gain a comprehensive understanding of multimedia and visual effects principles, tools, and techniques through theoretical learning and practical application.

Teaching Scheme:

Teaching Scheme				
L	T	P	Contact Hours	Credit
0	1	2	3	2

Content:

Unit No.	Course Contents	Teaching Hours	% Weightage
1	**Introduction to Multimedia and VFX** Overview of multimedia and its components, Introduction to visual effects (VFX) and its applications, History and evolution of VFX in multimedia, Basic principles of digital imaging and animation, Introduction to software tools used in VFX production	5	35
2	**Fundamentals of Visual Effects** Understanding the principles of visual effects, Study of digital compositing techniques, Introduction to keying and rotoscoping, Basics of motion tracking and match moving, Introduction to 3D modelling and texturing for VFX	5	35
3	**Advanced Visual Effects Techniques** Advanced compositing techniques and workflows, Special effects creation and manipulation, Advanced motion tracking and match moving techniques, 3D animation and character rigging for VFX, Introduction to particle systems and dynamics simulations	2	15
	VFX Production Pipeline and Project Management		

4	Overview of the VFX production pipeline, understanding roles and responsibilities in VFX production teams, Project planning and management in VFX production, Workflow optimization and efficiency techniques, Final project: students will work on a VFX project from concept to completion, applying the skills learned throughout the course	2	15

Course Outcomes:

Sr. No.	CO statement	Unit No
CO-1	Gain a foundational understanding of multimedia components and their applications.	1
CO-2	Demonstrate proficiency in digital compositing techniques and their application in VFX production.	2
CO-3	Explore and apply special effects creation and manipulation techniques.	3
CO-4	Understand the VFX production pipeline and the roles and responsibilities within a VFX production team.	4

List of Practical's: **Total Hours: 28**

Sr.No.	Practical Names
1	Understand the components of multimedia.
2	Create a presentation explaining the components of multimedia (text, images, audio, video, and animation).
3	Learn basic digital imaging techniques.
4	Use basic image editing software (like Photoshop or GIMP) to adjust colors, brightness, and contrast of an image and apply simple filters.
5	Create a simple animation (e.g., a bouncing ball) to understand keyframes and the principles of animation.
6	Combine two or more images to create a composite scene using layers and blending modes.
7	Remove a green screen background from a video and replace it with a different background. Practice rotoscoping techniques to isolate moving elements.
8	Understand motion tracking.
9	Explore real-world applications of VFX.
10	Design a simple particle effect (e.g., rain or sparks) and incorporate it into a scene

Teaching & Learning Methodology: -

The various methods or tools to teach the above subject:

1. Chalk/Marker & Board based classroom teaching
2. PPT Presentation
3. Videos showing important topics of Employability Enhancement & Job Skills

Books Recommended :

1. Ron Brinkmann The Art and Science of Digital Compositing, Morgan Kaufmann
2. Jeremy Birn Digital Lighting and Rendering, New Riders
3. Richard Williams The Animator's Survival Kit, Faber & Faber

CO-PO-PSO Matrix:

Co. No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	1	1	1								1	3
CO-2	3	2		2	3								2	3
CO-3	3	2	2										2	2
CO-4	3	2		1	2								3	1