

Progressive Education Society's
Modern College of Arts, Science and Commerce(Autonomous),
Shivajinagar,Pune5

(An Autonomous College Affiliated to Savitribai Phule Pune University)

Framework of Syllabus

For

B. Voc. (Animator)

Choice Based Credit System (CBCS) Syllabus Under National
Education Policy (NEP)

To be implemented from Academic Year 2024-2025

Level:- 4.5 (First Year) Sem:I

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	ESE	Total
Subject 1 T(2)+ (T/P) (2) or T(4)	24CsAnmU1101	Basics of Animation I	2		2		20	30	50
	24CsAnmU1102	Lab Course on 24CsAnmU1101		2		4	20	30	50
Subject 2 T(2)+ (T/P) (2) or T(4)	24CsAnmU1201	3D Modeling I	2		2		20	30	50
	24CsAnmU1202	Lab Course on 24CsAnmU1201		2		4	20	30	50
Subject 3 T(2)+ (T/P) (2) or T(4)	24CsAnmU1301	Lab Course on Animation Project Planning		4		8	40	60	100
IKS T(2)	24CpCopU1901	Generic IKS	2		2		20	30	50
GE/OE (T/P) (2)	24CsAnmU1401	Lab Course on Foundation Art		2		4	20	30	50
SEC (P) (2)	24CsAnmU1601	Lab Course on Foundation Art I		2			20	30	50
AEC T(2)	24CpCopU1701 / 24CpCopU1702	MIL-I (Hindi) / MIL-I (Marathi)	2		2		20	30	50
VECT (2)	24CpCopU1801	Environmental Science	2		2		20	30	50
Total			10	12	10	20			550

Level:- 4.5 (First Year) Sem:II

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	ESE	Total
Subject 1 T(2)+ T/P(2) or T(4)	24CsAnmU2101	Basics of Animation II	2		2		20	30	50
	24CsAnmU2102	Lab Course on 24CsAnmU2101		2		4	20	30	50
Subject 2 T(2)+ P(2)	24CsAnmU2201	3D Modeling II	2		2		20	30	50
	24CsAnmU2202	Lab Course on 24CsAnmU2201		2		4	20	30	50
Subject 3 T(2)+ P(2)	24CsAnmU2301	2D Animation Project	4		4		40	60	100
GE/OE (T/P)(2)	24CsAnmU2401	Lab Course on Calligraphy and Typography	2		2		20	30	50
SEC P(2)	24CsAnmU2601	Lab Course on Foundation Art II		2		4	20	30	50

AEC T(2)	24CpCopU2703	English Communication Skills I	2		2		20	30	50
VEC T(2)	24CpCopU2801	Democracy, Election and Governance	2		2		20	30	50
CC(2)	24CpCopU2001 / 24CpCopU2011 / 24CpCopU2021 / 24CpCopU2031 / 24CpCopU2041 / 24CpCopU2051 / 24CpCopU2061 / 24CpCopU2071	Physical Education / Cultural Activities / NSS / NCC / Fine Arts / Applied Arts / Visual Arts / Performing Arts	2		2		20	30	50
Total			16	06	16	12			550

Level:- 5.0 (Second Year) Sem:III

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2 or 4), (T/P)(2)	24CsAnmU3101	3D Animation I	2		2		20	30	50
	24CsAnmU3102	Production Process I	2		2		20	30	50
	24CsAnmU3103	Lab Course on 24CsAnmU3101		2		4	20	30	50
VSC P(2)	24CsAnmU3501	Lab Course on Digital Art I		2		4	20	30	50
IKS (T/P)(2)	24CsAnmU3901	Indian Art Culture	2		2		20	30	50
FP P(2)	24CsAnmU3002	Field Project I		2		4	20	30	50
Minor (T/P) (2+2 or 4)	24CsAnmU3301	Creative Writing Project		4		8	40	60	100
GE/OE (T/P) (2)	24CsAnmU3401	Lab Course on Graphic Designing		2		4	20	30	50
AEC T(2)	24CpCopU3703	English Communication Skills II	2		2		20	30	50
CC T(2)	24CpCopU3001	Online Course on Yoga	2		2		20	30	50
Total			10	12	10	24			550

Level:- 5.0 (Second Year) Sem:IV

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2 or 4), (T/P)(2)	24CsAnmU4101	3D Animation II	2		2		20	30	50
	24CsAnmU4102	Production Process II	2		2		20	30	50
	24CsAnmU4103	Lab Course on 24CsAnmU4101		2		4	20	30	50
VSC P(2)	24CsAnmU4501	Lab Course on Digital Art II		2		4	20	30	50

CEP P(2)	24CsCopU4003	Community Engagement Project		2		4	20	30	50
Minor (T/P) (2+2 or 4)	24CsAnmU4301	Screen Writing Project	4		4		40	60	100
GE/OE (T/P) (2)	24CsAnmU4401	Lab Course on e-content Development (Video Production)		2		4	20	30	50
SEC T(2)	24CsAnmU4601	Video Production	2		2		20	30	50
AEC T(2)	24CpCopU4701 / 24CpCopU4702	MIL-II (Hindi) / MIL-II (Marathi)	2		2		20	30	50
CC T(2)	24CpCopU4001	Health and Wellness	2		2		20	30	50
Total			14	08	14	16			550

Level:- 5.5 (Third Year)

Sem:-V

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core T(2+2+2+2or 4 + 2+2 or 4 + 4) P(2+2 or 4)	24CsAnmU5101	Motion Graphics	2		2		20	30	50
	24CsAnmU5102	Introduction to Game Design	2		2		20	30	50
	24CsAnmU5103	Multimedia I	4		4		40	60	100
	24CsAnmU5104	Lab Course on 24CsAnmU5101		2		4	40	60	100
	24CsAnmU5105	Lab Course on 24CsAnmU5102		2		4	20	30	50
Major Elective (T/P) (2+2 or 4)	24CsAnmU5201	Lab Course on Props and Prosthetics		4		8	40	60	100
	24CsAnmU5203	Game Designing Project		4		8	40	60	100
VSC P(2)	24CsAnmU5501	Stop Motion Short Film		2		4	20	30	50
FP (2)	24CsAnmU5001	Field Project II		2		4	20	30	50
Minor (T/P) (2)	24CsAnmU5302	Graphic Designing Project	2		2		20	30	50
Total			10	12	10	24			550

Level:- 5.5 (Third Year)

Sem:-VI

Course Type	Course Code	Course Title	Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total

Major Core T(2+2+2+2 or 4+2+2 or 4+4) P(2+2 or 4)	24CsAnmU6101	VFX	2		2		20	30	50
	24CsAnmU6102	3D Animation Techniques		2		4	20	30	50
	24CsAnmU6103	Multimedia II	4		4		40	60	100
	24CsAnmU6105	Lab Course on 24CsAnmU6101		2		4	20	30	50
Major Elective (T/P) (2+2 or 4)	24CsAnmU6201	Lab Course on Special Effects		4		8	40	60	100
	24CsAnmU6203	VFX Project		4		8	40	60	100
VSC P(2)	24CsAnmU6501	Animation Short Film		2		4	20	30	50
OJT (2)	24CsAnmU6004	On Job Training		4		8	40	60	100
Total			06	14	06	28			550

SEMESTER-V

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Third Year of B.Voc. (Animator)

Course Name: Motion Graphics

Course Code: 24CsAnmU5101

Teaching Scheme: TH: 2 Hours/Week

Credit : 2

Examination Scheme: CIA: 20 Marks

End-Sem: 30 Marks

Prerequisite Courses:

- Creative & Logical thinking ability
- Basic knowledge of Motion graphics

Course Objectives:

- To understand Motion Graphics techniques
- To understand different stages of film production

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their visualization power to explore new ideas.
- Edit and Render the digital videos
- Students will be able to Create their own films, advertisement.

Course Contents

Chapter 1	A Brief History of Motion Graphics	8 lectures
	● Precursors of Animation ● Early Cinematic Inventions ● Experimental Animation ● Motion Graphics in Film Titles ● Motion Graphics in Television	
Chapter 2	Motion Graphics in Film and Television	5 lectures
	● Film Titles ● Network Branding ● Commercials ● Public Service Announcements ● Music Videos	
Chapter 3	Motion Graphics in interactive Media	6 lectures
	● The Interactive Environment ● Motion over the Web ● Motion in Informational Kiosks ● Motion in Multimedia ● Motion in DVD-Video	
Chapter 4	Motion Graphics in the Environment	8 lectures
	● New Technologies ● immersive Environments ● Animated Exteriors ● Digital Signage ● Performance ● Alternate Spaces	
Chapter 5	Motion Literacy: Choreographing Movement	5 lectures

	• The Language of Motion • Spatial considerations • Temporal Considerations • Coordinating Movement	
Chapter 6	Images, Live-Action and Type	5 lectures
	• Visual Properties • Image Considerations • Live-Action Considerations • Typographic Considerations • Integrating Images, Live-Action, and Type	
Chapter 7	Render	1 lectures

Reference books:

1. Making MOGRTs in Adobe Premiere Pro and After Effects-Author: Jarle Leirpoll
2. Motion Graphics with Adobe Creative Cloud-Author: Stephen Kerlow
3. Adobe Premiere Pro Classroom in a Book-Author: Maxim Jago
4. Exploring Motion Graphics-Author: Ray Villalobos

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Third Year of B.Voc. (Animator)

Course Name: Introduction to Game Design

Course Code: 24CsAnmU5102

Teaching Scheme: TH: 2 Hours/Week

Credit : 2

Examination Scheme: CIA: 20 Marks

End-Sem: 30 Marks

Prerequisite Courses:

- Drawing Skills, Creative & Logical thinking ability
- Basic knowledge of Computer Fundamental

Course Objectives:

- To understand about gaming techniques
- To understand game technology and workflow

Course Outcomes:

On completion of the course, student will be able to–

- Students will have improved their visualization power to explore new ideas.
- Students will develop drawing skills.
- Students will be able to create professional game Designing.
- Students will develop gaming knowledge and skills.

Course Contents

Chapter 1	Introduction to Gaming	5 lectures
	● Introduction to Gaming ● History of Gaming ● First Gaming studio	
Chapter 2	Studios in gaming	8 lectures
	● Development in Games ● New age Studios ● Scope in Gaming ● Jobs in Gaming Industry	
Chapter 3	Softwares Used in gaming industries	6 lectures
	● Unreal ● Unity ● Blender ● RPG Maker ● Construct 3	
Chapter 4	Production Process	8 lectures
	● Pre Production ● Production ● Post Production	
Chapter 5	Types of games	5 lectures

	● Sandbox ● Real time strategy (RTS) ● Shooter (FPS and TPS) ● Multiplayer Online Battle Arena (MOBA) ● Role Playing Games ● Simulation and sports ● Puzzle ● Action – Adventure ● Survival and Horror ● Platformer	
Chapter 6	Assets	5 lectures
	● Properties ● Background ● Environment ● Costume	
Chapter 7	Character Development	4 lectures
	● Character bibles ● Character Turnarounds ● Properties Drawings ● Concept of a game (Written Work)	

Reference Books:

- 1.Introducing Character Animation with Blender - by Tony Mullen
- 2.Digital Animation Bible - by George Maestri
- 3.The Animator's Survival Kit - by Richard Williams
- 4.Blender 3D By Example (Second Edition) - by Oscar Baechler & Xury Greer
- 5.Blender Animation Cookbook - by Samuel Bernou

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Third Year of B.Voc. (Animator)

Course Name : Multimedia I

Course Code : 24CsAnmU5103

Teaching Scheme: TH: 2 Hours/Week

Credit 02

Examination Scheme: CIA : 20 Marks

End-Sem : 30 Marks

Prerequisite Courses:

- Computer Basics
- Digital Media and Graphic Designing Essentials

Course Objectives:

- To Study the Fundamentals of Multimedia.
- To Enhance the Knowledge of Multimedia Compression and Communication.
- To Develop Skills In multimedia content creation using tools.
- To study the basic concepts behind digital audio, including sampling, bit depth, and encoding.
- To study the basics of Compression techniques for video and audio.
- To Study the RGB and CMYK color models.

Course Outcomes:

On completion of the course, student will be able to–

- Evaluate different multimedia tools and technologies
- Recall the key principles, tools, and software used in multimedia design and animation.
- Use multimedia software to create digital content incorporating text, graphics, audio, video, and animation.
- Explain the principles of digital media, compression techniques, and file formats.
- Design and produce a complete multimedia animation project, from initial concept to final rendering, using various multimedia tools and techniques.
- Analyze the workflow of multimedia projects, identifying areas for improvement in the production process.

Course Contents

Unit 1	Introduction to Multimedia	4 lectures
	• What is Multimedia? • Evolution of Multimedia • Importance of Multimedia • Benefits of Multimedia • Where do we use Multimedia	
Unit 2	Multimedia Systems	5 lectures
	• Multimedia Applications • Hypertext and HyperMedia • Linear And Nonlinear Multimedia • Interactive Multimedia	
Unit 3	Multimedia Hardware	5 lectures
	• Overview of Multimedia PC Configuration • Multimedia Networks • Digital Scanners and Printers • Transferring Data	
Unit 4	Multimedia Softwares	5 lectures
	• Multimedia tools • Multimedia Operating systems • Techniques	
Unit 5	Graphics and Image Representation	5 lectures
	• Vector and Raster Graphics • Image Data types(1 bit, 8 bit and 24 bit) • File Formats • Basic Image processing and color models • RGB and CMYK	
Unit 6	Audio and Video Fundamentals	6 lectures
	• Digital Audio Concepts • Sample rates • Audio file formats • Video Representation • Video Compression Standards • Video Formats	

Reference books:

- Multimedia Communications- Applications, Networks, Protocols & Standards By Fred Halsall., Pearson Publications
- Multimedia Communication Systems - By K.R. Rao, Zoran S.B. & Dragorad A.M. – PHI Publications

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Third Year of B.Voc. (Animator)

Course Name: Lab Course on 24CsAnmU5101

Course Code: 24CsAnmU5104

Teaching Scheme: TH: 4 Hours/Week

Credit : 2

Examination Scheme: CIA: 20 Marks

End-Sem: 30 Marks

Practical Assignments

Sr.No	Assignments
1	Basic Keyframe Animation
2	Animated Text Introduction
3	Create a professional lower third for interview videos.
4	Social Media Promo (Instagram Reel)
5	Logo Reveal Animation
6	Create a motivational or educational quote video.
7	Kinetic Typography
8	Product Advertisement
9	Event Invitation Video
10	Template Customization (MOGRT) Creating Own templates

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Course Name: Lab Course on 24CsAnmU5102

Course Code: 24CsAnmU5105

Teaching Scheme: TH: 2 Hours/Week

Credit : 2

Examination Scheme: CIA: 20 Marks

End-Sem: 30 Marks

Practical Assignments

Sr.No	Assignments
1	Create 5 game objects.
2	Create Historical weapons.
3	Create Interior Design .
4	Create Car model.
5	Create a War canon.
6	Create Historical building
7	Create Space ship.
8	Create Human Model.
9	Create any product model.
10	Create A landscape.

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Third Year of B.Voc. (Animator)

Course Name : Lab Course on Props and Prosthetics

CourseCode:24CsAnmU5201

Teaching Scheme: Pr : 8 Hours/Week

Credit : 04

Examination Scheme: CIA : 50 Marks

End-Sem : 50 Marks

Prerequisite Courses:

- Detailed knowledge of Film making process.
- Knowledge of Art and Design.
- 3D modeling skills.

Course Objectives:

- To Study the historical aspects of Props and Prosthetics in Cinema.
- To learn the process of making Props.
- To undergo the entire research regarding the use of Props and prosthetics.
- To acquire a skill to create suitable props as per the script requirements.
- To study different materials used to develop props and prosthetics.

Course Outcomes:

On completion of the course, student will be able to –

Recognize the importance of Props and Prosthetics in Cinema.

Design and develop adequate stylized props for a film project.

Understand the role of props and prosthetics in visual storytelling.

Design, fabricate, and manage props for film and television.

Course Contents

Unit 1	Introduction to Props and Prosthetics; Definition and scope	6 Practicals
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	• Props vs Set Dressing vs Costumes • Practical effects vs CGI • History of props and prosthetics in cinema • Evolution from theater to modern filmmaking • Case Studies: Citizen Kane, Baahubali, Avatar	
Unit 2	Storytelling Through Props Props as narrative tools	6 Practicals
	• Symbolic and thematic props • Hero props vs background props • Character-specific props • Period accuracy and cultural sensitivity • Exercise: Script breakdown for prop requirements	
Unit 3	Types of Props	6 Practicals
	• Hand props • Set props • Consumable props • Mechanical and breakaway props • Weapons (realistic, rubber, replicas) • Food props and fake consumables • Safety considerations	
Unit 4	Prop Design & Fabrication Concept art and sketches	6 Practicals
	• Materials: wood, metal, plastic, foam, resin, 3D printing • Aging, distressing, and texturing • Scaling and proportion for camera • Color theory and lighting impact	
Unit 5	Props Management & Continuity	6 Practicals

	● Prop master roles and responsibilities ● Cataloging and labeling ● Continuity tracking across scenes ● Storage, transport, and maintenance ● On-set protocols	
Unit 6	Introduction to Prosthetics	6 Practicals
	● What are prosthetics in film ● Difference between makeup, SFX makeup, and prosthetics ● Medical vs cinematic prosthetics ● Ethics and realism	
Unit 7	Prosthetic Materials & Tools	6 Practicals
	● Latex, silicone, gelatin, foam latex ● Adhesives and removers ● Molds and casting ● Sculpting tools and armatures ● Hygiene and skin safety	
Unit 8	Prosthetic Design & Sculpting	6 Practicals
	● Life casting ● Sculpting facial features and body parts ● Character transformation design ● Aging, injuries, scars, fantasy creatures	

Practical Assignments

Sr.No	Assignments
1	Design and create Mythological weapons.

2	Design and create Historical weapons.
3	Design and create Futuristic SciFi weapons.
4	Create Different types of Masks.
5	Create a war canon.
6	Design and create a Grand Entrance with pillars and arc.
7	Design and create Fake furniture for stunt scenes.
8	Design and create A Super Hero Costume.
9	Design and create A Haunted house Props for horror scene.
10	Create A Set of Historical Fort.

Progressive Education Society's
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Third Year of B.Voc. (Animator)

Course Name : Lab Course on Digital Editing CourseCode:24CsAnmU5302

Teaching Scheme: TH: 4 Hours/Week

Credit : 2

Examination Scheme: CIA: 20 Marks

End-Sem: 30

Prerequisite Courses:

- Creative & Logical thinking ability
- Basic knowledge of Videography

Course Objectives:

- To understand Digital Editing techniques
- To understand different stages of film production

Course Outcomes:

On completion of the course, student will be able to

- Students will have improved their visualization power to explore new ideas.
- Edit and Render the digital videos
- Students will be able to Create their own films

Course Contents

Chapter 1	Introduction to digital Editing	8 lectures
	• Video Editing • Different Types of Video Editing • Modern Non-linear Editing • Evolution of Modern Non-linear Editing • Evolution of Digital Non-linear Editing • Principal of Video Editing	
Chapter 2	Introduction to Claymation	5 lectures
	• Introduction to Adobe Premiere pro • Interface of premiere pro • Importing Video • Storyboard techniques • Tools	
Chapter 3	Introduction to Cut-Out Animation	6 lectures
	→ Aspect Ratio → Analysis of film sequence from editing point of view ◆ Jump cut & 180 degree rule ◆ Walk & reveal framing ◆ Fill & Reveal framing ◆ Flash cuts & collage ◆ Sub –clip ◆ Split Screen ◆ Montage Sequence ◆ Cut/zoom Shots ◆ Multi takes ◆ Cut Away ◆ Freeze Frames ◆ Cross cut edits ◆ Match cut ◆ Subliminal cuts ◆ Slow/Fast motion ◆ J-cuts ◆ L-cuts Studying various techniques of video editing	
Chapter 4	Getting to know the workflow	8 lectures

	• Color Correction and Grading • Adjusting exposure and color balance • Applying color grading techniques to enhance the mood of the video	
Chapter 5	Working with Masks	5 lectures
	• Setting up the interface to work with audio • Examining audio characteristics • Adjusting audio volume & gain • Panning and balancing • Normalizing audio • Creating a split edit • Adjusting audio levels in a sequence • Working with the Audio Mixer • Adjusting EQ • Editing audio in Audition • Audio effects and transitions	
Chapter 6	Using the Brush Tool	5 lectures
	• Audio & Video Effects • Audio & Video Transition • Synchronizing Audio • Editing Audio • Incorporating Transitions into the editing process	
Chapter 7	Animating Layers	4 lectures
	• Titles & Still Graphics • Creating tiles for video • Incorporating titles into video production • Templates • Output • Various Types of Output	

Reference books:

1. Premiere Pro CC Digital Classroom Author Jerron Smith AGI Creative Team

SEMESTER-VI

Progressive Education Society's

Modern College of Arts, Science and Commerce,

Shivajinagar, Pune - 5

Third Year of B.SC (Animation)

Course Name: VFX

Course Code: 24CsAniU6101

Teaching Scheme: TH: 2 Hours/Week

Credit : 2

Examination Scheme: CIA: 20 Marks

End-Sem: 30

Prerequisite Courses:

- Animation and VFX Skills
- Advanced knowledge of VFX Compositing.

Course Objectives:

- To understand Visual Effect techniques
- To developed a new technique in the VFX Process
- To create interactive interface design of Film, Media, News and advertise.

Course Outcomes:

On completion of the course, the student will be able to–

- Understand VFX & Motion Graphics concepts
- Creating VFX Environment in the film
- Compose and Render the movie scene in digital videos format
- Students will have improved their visualization power to explore new ideas in film composition

Course Contents

Chapter 1	History of Stop Motion	8 lectures
	• The Beginning of stop motion animation • Cut – out animation & Clay-mation • Stop Motion Industry	

	• The Production Pipeline • Concept art and design • Storyboarding • Sound recording and exposure sheet • Designing and Building Puppets and Sets • Animation • Post-Production	
Chapter 2	Introduction to Claymation	5 lectures
	• Claymation Industry • Creating Clay model • Wire Armatures • Building Simple wire Armatures • Latex build-ups Puppets • Clay Puppets • Creating multi models for animation • Set and Props (Interior ,Exterior ,Props) • Puppet Animation • Basic Animation • Morphing , Movements , Walk , Blinks, Dialogue • Capturing Movement • What you need Digital SLR Cameras, webcams ,Tripod .	
Chapter 3	Introduction to Cut-Out Animation	6 lectures
	• Introduction to Cut-Out Animation • History of Cut out Animation • Traditional Cut out Technique • Digital Cut out Technique • Character Design for Cut – out Technique • Design character for cut out technique • Creating hand gestures • Facial expressions • Blink • Set and Props (Interior, Exterior, Props) • Animation using Digital Software • Creating animation using software • Importing character • Disturbing different body part in to layers • Basic Animation • Character animation	
Chapter 4	Getting to know the workflow	8 lectures
	• Creating a project and importing footage • Creating a composition and arranging layers • Adding Effects and modifying layer properties • Animating the composition • Previewing your work	

	• Optimizing performance in After Effects • Rendering and exporting your composition • Customizing the workspace • Controlling the brightness of the user interface • Finding resources for using After Effects	
chapter 5	Working with Masks	5 lectures
	• About masks • Creating a mask with the Pen tool • Editing a mask • About Rotoscoping • Feathering the edges of a mask • Replacing the content of the mask • Adding a reflection • Creating a vignette • Adjusting the color	
Chapter 6	Using the Brush Tool	5 lectures
	• Wire Removal • Creating a segmentation boundary • Fine-tuning the matte • Creating a transition from the full clip to the foreground • Creating the logo • Review questions and answers	
Chapter 7	Animating Layers	4 lectures
	• Simulating lighting changes • Duplicating an animation using the pick whip • Animating movement in the scenery • Adjusting the layers and creating a track matte • Animating the shadows • Adding a lens flare effect • Animating the clock effect	
Chapter 8	Composing Layer Passes and Tracking	4 lectures
	• Necessity of Render Passes • Composing a CGI Element with all its render passes • Applying Layer Modes • Manipulating Passes to create effect and depth • Using motion stabilization • Using single-point motion tracking • Using multipoint tracking • Creating a particle simulation • Retiming playback using the Time warp effect	
Chapter 9	Particles	3 lectures

	● Introduction to particles & UI ● Adding Particles to a scene ● Particles in 3D Scene ● Creating Effects using Particles ● Using Particle Presets ● Previewing & Rendering Particles	
Chapter 10	Rendering	1 lectures

Reference books:

1. After Effects CC classroom in a book – author adobe creative team, Pearson education
2. *Adobe After Effects Classroom in a Book* (2024 Release)-Lisa Fridsma & Brie Gyncild-**Publisher:** Adobe Press (an imprint of Peachpit / Pearson)
3. Learn Adobe After Effects CC for Visual Effects and Motion Graphics-Joe Dockery & Conrad Chavez-**Publisher:** Peachpit Press
4. Compositing Visual Effects in After Effects: Essential Techniques-Lee Lanier-**Publisher:** Routledge / Focal Press

Progressive Education Society's

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**Third Year of B.Voc. Animator
NEP 2024 Pattern**

Course Name : 3D Animation Techniques

Course Code : 24CsAnmU6102

Teaching Scheme: Pr : 2 Hours/Week

Credit : 02

Examination Scheme: CIA : 20 Marks

End-Sem : 30 Marks

Prerequisite Courses:

Fundamentals of 3D Graphics, Basic knowledge of Blender Interface, 3D Modeling Basics, Introduction to Materials and Lighting, Basic Camera Setup, and Computer Fundamentals.

Course Objectives:

- To teach the basics of 3D animation using Blender
- To help students understand animation principles and keyframes
- To create object, character, and camera animations
- To introduce physics simulations like rigid body, cloth, and particles
- To learn how to render animated scenes properly

Course Outcomes:

On completion of the course, student will be able to –

- Create smooth animations using animation principles
- Animate objects, characters, and cameras in Blender
- Use physics simulations such as rigid body, cloth, and fluid
- Create particle effects like fire, smoke, and explosions
- Render and export animated videos for final output

Course Contents

Unit 1	Blender Animation Basics	4 Lectures
	● 12 Principles of Animation ● Timeline & Dope Sheet ● Keyframes Explained ● Auto Key & Manual Keyframing ● Interpolation Types ● Graph Editor Basics ● Playback & Frame Rate Settings	
Unit 2	Object Animation	6 Lectures

	● Transform Animation (Move, Rotate, Scale) ● Looping Animation ● Simple Mechanical Animation ● Parenting & Constraints ● Camera Animation ● Object Follow Path Animation	
Unit 3	Character Animation Basics	8 Lectures
	● Introduction to Rigging ● Armature Basics ● Bone Hierarchy ● IK & FK Explained ● Simple Character Rig ● Walk Cycle Basics ● Pose Mode & Key Posing	
Unit 4	Physics Simulation	6 Lectures
	● Introduction to Physics in Blender ● Rigid Body Physics ● Active & Passive Rigid Bodies ● Collision Shapes ● Gravity & Mass ● Soft Body Basics ● Collision Settings ● Baking Simulations	
Unit 5	Cloth & Soft Body Simulation	5 Lectures
	● Cloth Modifier ● Cloth Properties ● Cloth Collision ● Wind Force ● Soft Body Properties ● Common Problems & Fixes ● Realistic Cloth Movement	

Unit 6	Particle System	7 Lectures
	● Introduction to Particle Systems ● Emitter vs Hair Particles ● Particle Settings Explained ● Velocity, Gravity & Rotation ● Particle Rendering Methods ● Using Objects as Particles ● Particle Animation Control	
Unit 7	Advanced Particle Effects	6 Lectures
	● Fire & Smoke (Mantaflow Basics) ● Liquid Simulation Introduction ● Explosion Effects ● Dust & Debris Effects ● Combining Particles with Forces	
Unit 8	Rendering Animated Scenes	6 Lectures
	● Lighting for Animation ● Motion Blur ● Camera Movements ● Render Settings for Animation ● Output Formats (MP4, Image Sequences) ● Render Optimization for Animation	

Reference Books:-

- 1.Introducing Character Animation with Blender - by Tony Mullen
- 2.Digital Animation Bible - by George Maestri
- 3.The Animator's Survival Kit - by Richard Williams
- 4.Blender 3D By Example (Second Edition) - by Oscar Baechler & Xury Greer
- 5.Blender Animation Cookbook - by Samuel Bernou

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Third Year of B.Voc. (Animator)

Course Name : Multimedia II

Course Code :24CsAnmU6103

Teaching Scheme: TH: 2 Hours/Week

Credit 02

Examination Scheme: CIA : 20 Marks

End-Sem : 30 Marks

Prerequisite Courses:

- Computer BASics
- Digital Media and Graphic Designing Essentials

Course Objectives:

- .To Study the Fundamentals of Multimedia
- To Enhance the Knowledge of Multimedia Compression and Communication
- To Develop Skills In multimedia content creation using tools.
- Gain a foundational understanding of the history, types, and evolution of print media.
- Understand the various types of data transmission media, including twisted pair cables, coaxial cables, optical fiber, and Wi-Fi.
- Develop practical skills for creating multimedia content across different media formats.

Course Outcomes:

On completion of the course, student will be able to–

- Apply the knowledge of different data transmission media to determine the appropriate medium for specific communication needs.
- Recall the key principles, tools, and software used in multimedia design and animation.
- Use multimedia software to create digital content incorporating text, graphics, audio, video, and animation.
- Explain the principles of digital media, compression techniques, and file formats.
- Design and produce a complete multimedia animation project, from initial concept to final rendering, using various multimedia tools and techniques.
- Create a multimedia file with optimized compression settings.

Course Contents

Unit 1	Multimedia Communications	4 lectures
	• Multimedia Networks • Multimedia Communication Model • Interactive Media Applications	
Unit 2	Printing Media	6 lectures
	• Introduction to Print Media • Types of Print Media • History of Print Media • Design and Layout in Print Media • Print Advertising.	
Unit 3	Digital Communication	5 lectures
	• Data Transmission Media • Communication System • Twisted Pair cables • Coaxial Cable • Optical Fibre • Wifi	
Unit 4	Overview of multimedia software tools	5 lectures
	• Digital Audio • Animation Techniques • Graphics and Image editing • video Editing	
Unit 5	Data Compression Techniques	6 lectures
	• Compression Fundamentals • Understanding the need of Compression • Compression types • lossless and lossy • Audio Data Compression	
Unit 6	Advanced Multimedia Tools and Techniques	4 lectures
	• Tools for image, Audio and Video • Interactive Multimedia Applications and Games • Introduction to virtual and augmented reality	

Reference books:

- Multimedia Communications- Applications, Networks, Protocols & Standards By Fred Halsall., Pearson Publications
- Multimedia Communication Systems - By K.R. Rao, Zoran S.B. & Dragorad A.M. – PHI Publications

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Third Year of B.Voc. Animator
NEP 2024 Pattern

Course Name : Lab Course on 24CsAnmU6101 (VFX)
Course Code : 24CsAnmU6104

Teaching Scheme: Pr : 4 Hours/Week

Credit : 02

Examination Scheme: CIA : 20 Marks

End-Sem : 30 Marks

Practical List

Sr. No.	Name of the experiment
1	Rotoscopy
2	Clean Plate
3	Report News Studio using green screen
4	Composition
5	Camera Tracking
6	Matte painting and camera moment
7	Camera Projection
8	Creating a Realistic Fire or Smoke Effect
9	Wire Removal
10	Creating a Sci-Fi Hologram Effect
11	Time Freeze & Speed Ramp Effects
12	Short Film

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Third Year of B.Voc. Animator
NEP 2024 Pattern

Course Name : Lab Course on 24CsAnmU6102 (3D Animation techniques)
Course Code : 24CsAnmU6105

Teaching Scheme: Pr : 4 Hours/Week

Credit : 02

Examination Scheme: CIA : 20 Marks

End-Sem : 30 Marks

Practical Assignments

Sr.No	Assignments
1	Create Scream machine(pendulum).
2	Create bouncing ball animation using Rigid body.
3	Create human Rig.
4	Create walk cycle.
5	Create a curtain animation.
6	Create a camera animation
7	Create fluid simulation.
8	Create blast.
9	Create car Rig.
10	Create A 30 sec product advertisement.

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Third Year of B.Voc. Animator
NEP 2024 Pattern
Major Elective (P)

Course Name : Lab Course on Special Effects

Course Code : 24CsAnmU6201

Teaching Scheme: Pr : 8 Hours/Week

Credit : 04

Examination Scheme: CIA : 40 Marks

End-Sem : 60 Marks

Prerequisite Courses:

- Detailed knowledge of Film making process.
- Knowledge of Art and Design.
- Light effects and Camera tricks skills.

Course Objectives :

- To Study the historical aspects of special effects in Cinema.
- To learn the process of special effects.
- To undergo the entire research regarding the special effects.
- To acquire a skill to create suitable special effects as per the script requirements.

Course Outcomes :

On completion of the course, student will be able to –

Understand the history and evolution of special effects in cinema.
Distinguish between practical effects, visual effects, and CGI.
Design effects that enhance narrative of the movie project.
Execute basic practical and digital effects safely and creatively.
Collaborate in planning and producing effects-driven scenes
Analyze special effects in films critically and technically

Course Contents

Unit 1	Introduction to Special Effects	6 Practicals
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	• What are special effects vs visual effects? • SFX vs VFX vs CGI • Role of effects in storytelling • Course overview and expectations • History of Special Effects	
Unit 2	Pre-Production for Effects	6 Practicals
	• Script breakdowns for effects • Storyboarding and pre-visualization • Budgeting and scheduling effects shots • Safety planning	
Unit 3	Camera Tricks & In-Camera Effects	6 Practicals
	• Forced perspective • Double exposure • Miniatures and scale models • Matte paintings (traditional)	
Unit 4	Atmospheric Effects	6 Practicals
	• Smoke, fog, rain, wind • Fire and explosions (theory & safety only) • Enhancing realism on set • Week 7: Miniatures & Destruction Effects • Building miniatures • Simulating destruction	
Unit 5	Green Screen & Compositing	6 Practicals
	• Chroma key principles • Lighting for green screen • Basic compositing techniques • Wire removal techniques.	

Unit 6	Ethics & Realism in Special Effects	6 Practicals
	• Effects vs audience manipulation • Violence, realism, and responsibility • Effects in documentaries and realism-driven films • Role of Art Director	

Practical Assignments

Sr.No	Assignments
1	Create a double role scene with camera trick.
2	Disappear/Reappear camera trick
3	Wire removal trick (Flying object)
4	Accident Scene using miniature models.
5	Action Scene.
6	Moving car illusion. (Back projection)
7	Lightning effect.
8	A character shrinking or growing effect.
9	Fighting with a wild animal.
10	Rain, Fog, Wind effect.
11	Replacing CGI background with Green Screen.
12	News room effect.
13	A character falling from a height.
14	Underwater scene.
15	Bullet shot effect.