

Savitribai Phule Pune University

Structure of UG Program as per NEP-2020

Name of Program : B Sc Animation

Major Course : Animation

Level : 4.5 (First Year) Semester : I

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
Subject I 2(T)+2(P)	ANM-101-T	Basics of Animation	2	-	2	-	15	35	50
	ANM-102-P	Lab Course on ANM-101-T	-	2	-	2	15	35	50
Subject II 2(T)+2(P)	ANM-103-T	Foundation of Art	2	-	2	-	15	35	50
	ANM-104-P	Lab Course on ANM-103-T	-	2	-	2	15	35	50
Subject III 2(T)+2(P)	ANM-105-T	Vector Design (Illustrator)	2	-	2	-	15	35	50
	ANM-106-P	Lab Course on ANM-105-T	-	2	-	2	15	35	50
GE/OE 2(T)	ANM-107-OE	Basics of Digital Photography and Film Making	2	-	2	-	15	35	50
SEC 2(T/P)	ANM-108-SEC	Character Design	-	2	-	2	15	35	50
IKS 2(T)	IKS-100-T	Generic IKS	2	-	2	-	15	35	50
AEC 2(T)	ANM-109-AEC	MIL-I (Hindi)/ MIL-I (Marathi)/ MIL-I (English)	2	-	2	-	15	35	50
VEC (2)	ANM-110-VEC	Environmental Science-I	2	-	2	-	15	35	50
TOTAL			14	8	14	8			

Level : 4.5 (First Year) Semester : II

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
Subject I 2(T)+2(P)	ANM-151-T	Digital Graphics (Photoshop)	2	-	2	-	15	35	50
	ANM-152-P	Lab Course on ANM-151-T	-	2	-	2	15	35	50
Subject II 2(T)+2(P)	ANM-153-T	Print Design (InDesign)	2	-	2	-	15	35	50
	ANM-154-P	Lab Course on ANM-153-T	-	2	-	2	15	35	50
Subject III 2(T)+2(P)	ANM-155-T	Production Process	2	-	2	-	15	35	50
	ANM-156-P	Lab Course on ANM-155-T	-	2	-	2	15	35	50
GE/OE 2(P)	ANM-157-OE	Basics of Image Editing and Video Editing (Lightroom + Filmora)	-	2	-	2	15	35	50
SEC 2(T/P)	ANM-158-SEC	Digital Photography	-	2	-	2	15	35	50
AEC 2(T)	ANM-159-AEC	MIL-II (Hindi)/ MIL-II (Marathi)/ MIL-II (English)	2	-	2	-	15	35	50
VEC (2)	ANM-160-VEC	Environmental Science-II	2	-	2	-	15	35	50
CC (2)	ANM-161-CC	Course from University Basket	2	-	2	-	15	35	50
TOTAL			12	10	12	10			

Level : 5.0 (Second Year) Semester : III

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
MajorCore 4(T)+2(P)	ANM-201-MJ	3D Animation (3Ds Max)	4	-	4	-	30	70	100
	ANM-202-MJ	Lab Course on ANM-201-MJ	-	2	-	2	15	35	50
VSC 2(T/P)	ANM-221-VSC	Film Making Fundamentals	-	2	-	2	15	35	50
FP/CEP (2)	ANM-231-FP	Mini Project based on Graphic design.	-	2	-	2	15	35	50
Minor 2(T)+2(P)	ANM-241-MN	Design Thinking	2	-	2	-	15	35	50
	ANM-242-MN	2D Animation (Animate)	-	2	-	2	15	35	50
GE/OE 2(T)	ANM-203-OE	Designing & Video Animation for Social Media	2	-	2	-	15	35	50
IKS 2(T)	ANM-200-IKS	Film Appreciation and Visual Communication	2	-	2	-	15	35	50
AEC 2(T)	ANM-204-AEC	Soft Skills – I	2	-	2	-	15	35	50
CC (2)	ANM-205-CC	Course from University Basket	2	-	2	-	15	35	50
TOTAL			14	8	14	8			

Level : 5.0 (Second Year) Semester : IV

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
MajorCore 4(T)+2(P)	ANM-251-MJ	Advance 3D Animation – I (Maya)	4	-	4	-	30	70	100
	ANM-252-MJ	Lab Course on ANM-251-MJ	-	2	-	2	15	35	50
VSC 2 (T/P)	ANM-271-VSC	Mini Project based on Graphic Design	-	2	-	2	15	35	50
FP/CEP (2)	ANM-281-CEP	Documentary on Community Engagement and Service	-	2	-	2	15	35	50
Minor 2(T)+2(P)	ANM-291-MN	Video Editing (Premiere)	2	-	2	-	15	35	50
	ANM-292-MN	Lab Course on ANM-291-MN	-	2	-	2	15	35	50
GE/OE 2(P)	ANM-253-OE	Explainer Video Animation & Designing for Social Media	-	2	-	2	15	35	50
SEC 2(T/P)	ANM-254-SEC	Stop Motion Techniques	-	2	-	2	15	35	50
AEC 2(T)	ANM-255-AEC	Soft Skills – II	2	-	2	-	15	35	50
CC (2)	ANM-256-CC	Course from University Basket	2	-	2	-	15	35	50
TOTAL			10	12	10	12			

Level : 5.5 (Third Year) Semester : V

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
MajorCore 8(T)+ 4(P)	ANM-301-MJ	Advance 3D Animation - II (Maya)	4	-	4	-	30	70	100
	ANM-302-MJ	Lab Course on ANM-301-MJ	-	2	-	2	15	35	50
	ANM-303-MJ	Blender Animation	4	-	4	-	30	70	100
	ANM-304-MJ	Lab Course on ANM-303-MJ	-	2	-	2	15	35	50
Major Elective 2(T) + 2(P)	ANM-310-ME	Motion Graphics & Compositing (After Effects)	2	-	2	-	15	35	50
	ANM-311-ME	Lab Course on ANM-310-ME	-	2	-	2	15	35	50
	OR								
	ANM-312-ME	Visual Effect (Silhouette)	2	-	2	-	15	35	50
	ANM-313-ME	Lab Course on ANM-312-ME	-	2	-	2	15	35	50
VSC 2(T/P)	ANM-321-VSC	3D Sculpting (ZBrush)	-	2	-	2	15	35	50
FP/CEP 2(FP/CEP)	ANM-331-FP	Mini Project based on 2D/3D Animation (Animate/Maya/Blender)	-	2	-	2	15	35	50
Minor 2(T)	ANM-341-MN	White Board Animation and SketchUp Design	2	-	2	-	15	35	50
TOTAL			12	10	12	10			

Level : 5.5 (Third Year) Semester : VI

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
MajorCore 8(T)+4(P)	ANM-351-MJ	Visual Effect-I (Nuke)	4	-	4	-	30	70	100
	ANM-352-MJ	Lab Course on ANM-351-MJ	-	2	-	2	15	35	50
	ANM-353-MJ	Augmented Reality (AR) (Unity)	4	-	4	-	30	70	100
	ANM-354-MJ	Lab Course on ANM-353-MJ	-	2	-	2	15	35	50
Major Elective 2(T)+2(P)	ANM-360-ME	Visual Effect- II (Silhouette)	2	-	2	-	15	35	50
	ANM-361-ME	Lab Course on ANM-360-ME	-	2	-	2	15	35	50
	OR								
	ANM-362-ME	Motion Graphics & Compositing (After Effects)	2	-	2	-	15	35	50
	ANM-363-ME	Lab Course on ANM-362-ME	-	2	-	2	15	35	50
VSC 2(T/P)	ANM-371-VSC	Showreel and Project	-	2	-	2	15	35	50
FP/OJT/CEP 4(OJT)	ANM-381-OJT	On Job Training	-	4	-	4	30	70	100
TOTAL			10	12	10	12			

Level : 6.0 (Forth Year) Semester : VII (Honors with Research Degree)

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
MajorCore 6(T)+4(P)	ANM-401-MJ	Game Design	2	-	2	-	15	35	50
	ANM-402-MJ	Lab Course on ANM-401-MJ	-	2	-	2	15	35	50
	ANM-403-MJ	IPR & Cyber Security	2	-	2	-	15	35	50
	ANM-404-MJ	Digital Marketing	2	-	2	-	15	35	50
	ANM-405-MJ	Audio Editing (Audition)	-	2	-	2	15	35	50
Major Elective 2(T)+2(P)	ANM-410-ME	UI & UX Design	2	-	2	-	15	35	50
	ANM-411-ME	Lab Course on ANM-410-ME	-	2	-	2	15	35	50
	OR								
	ANM-412-ME	Web Technology	2	-	2	-	15	35	50
	ANM-413-ME	Lab Course on ANM-412-ME	-	2	-	2	15	35	50
4(RP)	ANM-431-RP	Research Project	-	4	-	8	30	70	100
4(RM) (T)	ANM-441-RM	Research Methodology	4	-	4	-	30	70	100
TOTAL			12	10	12	10			

Level : 6.0 (Forth Year) Semester : VIII (Honors with Research Degree)

CourseType	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme andMax Marks		
			TH	PR	TH	PR	CE	EE	Total
MajorCore 6(T)+4(P)	ANM-451-MJ	Game Production (Unity)	2	-	2	-	15	35	50
	ANM-452-MJ	Lab Course on ANM801MJ	-	2	-	2	15	35	50
	ANM-453-MJ	Basics of Marketing & Portfolio Development	2	-	2	-	15	35	50
	ANM-454-MJ	Game Development (Unreal Engine)	2	-	2	-	15	35	50
	ANM-455-MJ	Lab Course on ANM804MJ	-	2	-	2	15	35	50
Major Elective 2(T)+2(P)	ANM-460-ME	Advanced VFX -I (Real Flow)	2	-	2	-	15	35	50
	ANM-461-ME	Lab Course on ANM806ME	-	2	-	2	15	35	50
	OR								
	ANM-462-ME	Advanced VFX -II (Mocha Pro)	2	-	2	-	15	35	50
	ANM-463-ME	Lab Course on ANM808ME	-	2	-	2	15	35	50
8(RP)	ANM-481-RP	Research Project	-	8	-	16	60	140	200
TOTAL			08	14	08	22			

OR

Level : 6.0 (Forth Year) Semester : VII (Honors Degree)

Course Type	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core 10(T)+4(P)	ANM-401-MJ	Game Design	4	-	4	-	30	70	100
	ANM-402-MJ	Lab Course on ANM-451-MJ	-	2	-	2	15	35	50
	ANM-403-MJ	IPR & Cyber Security	4	-	4	-	30	70	100
	ANM-404-MJ	Digital Marketing	2	-	2	-	15	35	50
	ANM-405-MJ	Audio Editing (Audition)	-	2	-	2	15	35	50
Major Elective 2(T)+2(P)	ANM-410-ME	UI & UX Design	2	-	2	-	15	35	50
	ANM-411-ME	Lab Course on ANM-460-ME	-	2	-	2	15	35	50
	OR								
	ANM-412-ME	Web Technology	2	-	2	-	15	35	50
	ANM-413-ME	Lab Course on ANM-462-ME	-	2	-	2	15	35	50
4 (RM) (T)	ANM-441-RM	Research Methodology	4	-	4	-	30	70	100
TOTAL			16	06	16	06			

Level : 6.0 (Forth Year) Semester : VIII (Honors Degree)

Course Type	Course Code	Course Title	Course Credits		Teaching Scheme Hr/Week		Evaluation Scheme and Max Marks		
			TH	PR	TH	PR	CE	EE	Total
Major Core 10(T)+4(P)	ANM-451-MJ	Game Production (Unity)	4	-	4	-	30	70	100
	ANM-452-MJ	Lab Course on ANM801MJ	-	2	-	2	15	35	50
	ANM-453-MJ	Basics of Marketing & Portfolio Development	2	-	2	-	15	35	50
	ANM-454-MJ	Game Development (Unreal Engine)	4	-	4	-	30	70	100
	ANM-455-MJ	Lab Course on ANM804MJ	-	2	-	2	15	35	50
Major Elective 2(T)+2(P)	ANM-460-ME	Advanced VFX -I (Real Flow)	2	-	2	-	15	35	50
	ANM-461-ME	Lab Course on ANM806ME	-	2	-	2	15	35	50
	OR								
	ANM-462-ME	Advanced VFX -II (Mocha Pro)	2	-	2	-	15	35	50
	ANM-463-ME	Lab Course on ANM808ME	-	2	-	2	15	35	50
4 (OJT)	ANM-481-OJT	On Job Training	-	4	-	4	30	70	100
TOTAL			12	10	12	10			

Title of the Course: Advance 3D Animation - II (Maya)								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 4(T)	ANM-301-MJ	04	00	04	60	30	70	100
Course Objectives:- • Develop advanced skills in 3D modeling, including hard surface and organic modeling techniques. • Gain knowledge of advanced texturing, shading, and look development using UV mapping and external tools like Adobe Photoshop and Illustrator. • Build strong foundations in character rigging, including skeleton setup, constraints, FK/IK systems, and deformation techniques. • Apply animation principles to create realistic character motion, including walk cycles, facial animation, and lip-sync. • Explore dynamics and simulations such as particles, cloth, hair, fluids, and procedural animation tools.								
Course Outcomes:- • Design and optimize human characters with proper topology suitable for animation. • Apply advanced UV mapping and texturing techniques to achieve realistic surface details. • Develop and implement character rigs, including skeletons, controllers, and deformation systems • Produce high-quality character animations, including body mechanics, facial expressions, and lip-sync. • Utilize dynamics and simulation tools such as particles, cloth, hair, and fluids for visual effects.								
Course Content								
Unit	Unit Name					Lectures		
Unit 1	Advanced Modeling & Production Workflow					6		
1.1 Advanced polygon modeling techniques (hard surface & organic modeling) 1.2 Human character modeling (anatomy-based approach, edge flow optimization) 1.3 Retopology techniques and mesh optimization for animation 1.4 High-poly to low-poly workflow (game & film pipeline basics)								

Unit 2	Advanced Texturing, Shading & Look Development	5
2.1 Advanced UV Unwarping 2.2 Texture creation in Photoshop/Illustrator 2.3 Texture mapping 2.4 Bump/Normal/displacement Maps and applications		
Unit 3	Character Rigging & Deformation Systems	11
3.1 Introduction to rigging pipeline and skeleton creation (joint hierarchy) 3.2 Mechanical Rig 3.3 Deformers Lattice, Wrap, Cluster, Sculpt, Jiggle, Wire 3.4 Working with Bones & Biped Bone Setup 3.5 Constraints (parent, orient, point, aim, scale constraints) 3.6 Forward Kinematics (FK) and Inverse Kinematics (IK) systems 3.7 Rigging human character 3.8 Controllers creation 3.9 Skinning techniques (smooth bind, rigid bind, weight painting) 3.10 Deformation tools (blend shapes, corrective shapes) 3.11 Facial Rigging		
Unit 4	Character Animation	10
4.1 Principles of animation (timing, spacing, squash & stretch, anticipation) 4.2 Graph editor and animation curves refinement 4.3 Walk cycle and run cycle (body mechanics) 4.4 Facial animation using blend shapes/morph targets 4.5 Lip-Sync, Dialogue & Facial Animation 4.6 Animation using props (constraints) 4.7 Acting and performance animation fundamentals(Push/pull) 4.8 Moving object/character using Motion Path constraint		
Unit 5	Dynamics, Simulations & Effects	18
5.1 Introduction to Particle Dynamics - Particle Emission , Fields & dynamic properties 5.2 Controlling Physical properties of particle- Shape Instance & Color 5.3 Introduction to dynamics (rigid body & soft body simulations) 5.4 Cloth simulation using nCloth (garments, flags) 5.5 Hair and fur using XGen (grooming basics) 5.6 Working With Sprite Wizard, Rendering process 5.7 Working with 3D Container(Blast,Smoke etc) 5.8 Bifrost basics (fluids: water, liquid simulations) 5.9 MASH tools for motion graphics and procedural animation		
Unit 6	Final Project & Showreel Development	10
6.1 Short film/Scene with all preproduction documents minimum 1 Minimum & 5 Min maximum 6.2 Final 3D Showreel Submission		

Title of the Course: Lab Course on ANM-301-MJ								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 2(P)	ANM-302-MJ	00	02	02	30	15	35	50
Course Objectives:- - Develop advanced 3D models using polygon modeling techniques for hard-surface objects, organic forms, and human characters while maintaining proper topology and production standards. - Create production-ready assets by performing UV mapping, texturing, shading, and applying bump, normal, and displacement maps for realistic visual appearance. - Design and implement character and mechanical rigs using skeleton hierarchies, constraints, FK/IK systems, controllers, skinning techniques, and facial rigging methods. - Produce high-quality animations by applying animation principles, body mechanics, acting, lip-sync, facial expressions, object interaction, and performance-based character animation. - Generate dynamic visual effects and simulations using particle systems, cloth simulation, hair/fur grooming, smoke, explosions, crowd effects, and procedural animation tools, and present the work through a professional showreel.								
Course Outcomes:- - Create advanced hard-surface and organic 3D models, including animation-ready human characters with optimized topology and production workflows. - Apply UV mapping, texture creation, material development, and shading techniques to produce visually appealing and production-ready 3D assets. - Construct mechanical and character rigs using industry-standard rigging techniques, including controllers, constraints, skinning, deformation systems, and facial rigging. - Demonstrate proficiency in character and object animation by applying animation principles, walk cycles, acting performance, prop interaction, push/pull actions, and lip-sync animation. - Develop visual effects and simulations using particle dynamics, cloth, hair/fur, smoke, explosions, crowd systems, and procedural animation tools, and compile the results into a professional-quality showreel								
Practical List								
- Create a detailed hard-surface model using advanced polygon modeling techniques. - Develop a realistic human character using anatomy-based modeling and optimized topology.								

3. Create professional UV layouts and textures for a 3D asset.
4. Create a functional mechanical rig using constraints and controllers.
5. Develop a complete rig for a human character.
6. Create a facial rig using blend shapes and controllers.
7. Create an Object animation.
8. Apply animation principles to create a walk cycle for a character.
9. Character animation with prop.
10. To create a performance-based animation using facial expressions, lip-sync, and character acting.
11. Create a 10–15 second character animation showing a character interacting with a heavy object using either a Push or Pull action.
12. To create a dynamic particle-based visual effect using particle emission, fields, and rigid/soft body simulations.
13. Create a particle system and replace particles with 3D objects using **Shape Instance**. Animate particle color changes over lifespan
14. To simulate realistic cloth movement and create basic hair/fur grooming using XGen.
15. Create a smoke or explosion effect using a 3D Container.
16. Create Crowd-style duplication using Sprite Wizard
17. Showreel submission Minimum 2 min & Maximum 3 min

Reference books:

- 1 . Autodesk Maya PDF

Title of the Course: ANM-303-MJ								
Year: III					Semester: V			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core	ANM-303MJ	04	00	04	60	30	70	100
Course Objectives :- • To master the Blender interface and professional keyboard-driven workflow. • To understand the complete 3D production pipeline: Modeling, Texturing, Rigging, and Animation. • To prepare students for industry roles such as 3D Modeler, Texture Artist, or Animator. • To develop problem-solving skills for technical 3D challenges.								
Course Outcomes :- Student will be able to :- • Navigate and customize the Blender workspace efficiently. • Create high-quality 3D assets using various modeling techniques. • Apply advanced PBR (Physically Based Rendering) textures and materials. • Build functional character rigs and create fluid animations. • Execute high-quality renders using Eevee and Cycles engines.								
Course Contents								
Unit 1	THE BLENDER ECOSYSTEM & WORKFLOW						9 hours	
1.1 Introduction to Blender: Open Source philosophy and industry standing. 1.2 UI Customization: Viewports, Outliner, Properties, and Workspaces. 1.3 Navigation Mastery: Essential shortcuts and the "Industry Compatible" keymap. 1.4 Scene Management: Collections, Naming Conventions, and File Linking/Appending.								
Unit 2	INTRODUCTION TO ADVANCED 3D MODELING TECHNIQUES						5 hours	
2.1. Hard Surface Modeling: Boolean workflows, Beveling, and Topology flow. 2.2. Organic Modeling: Introduction to Digital Sculpting and Retopology. 2.3. Modifiers: Mastering Mirror, Array, Solidify, and Subdivision Surface. 2.4. Geometry Nodes: Basics of procedural modeling and scattering.								
Unit 3	UV MAPPING & TEXTURING						8 hours	
3.1. Unwrapping: Marking Seams, UV Packing, and minimizing distortion. 3.2. Shading: Understanding the Principled BSDF shader. 3.3. Texture Painting: Direct painting on 3D models and stencil usage. 3.4. PBR Workflow: Using Albedo, Roughness, Normal, and Metallic maps.								

Unit 4	LIGHTING & CINEMATOGRAPHY	8 hours
4.1.	Light Types: Point, Sun, Spot, and Area lights.	
4.2.	HDRI Environments: Setting up world lighting for realism.	
4.3.	Camera Settings: Focal length, Depth of Field (Bokeh), and Composition.	
4.4.	Three-Point Lighting: Applying classic studio techniques in 3D.	
Unit 5	RIGGING & CHARACTER DEFORMATION	7 hours
5.1	Armatures: Creating bones, parenting, and bone hierarchies.	
5.2	Constraints: Implementing IK (Inverse Kinematics) and FK (Forward Kinematics).	
5.3	Weight Painting: Ensuring smooth mesh deformation.	
5.4	Shape Keys: Creating facial expressions and corrective shapes.	
Unit 6	ANIMATION PRINCIPLES IN 3D	10 hours
6.1	Timeline & Graph Editor: Managing keyframes and interpolation curves.	
6.2	Dope Sheet: Timing and spacing of actions.	
6.3	Walk Cycles: Creating seamless loops for characters.	
6.4	Non-Linear Animation (NLA): Mixing and layering different animation clips.	
Unit 7	VISUAL EFFECTS & PHYSICS	8 hours
7.1.	Particles: Creating hair, fur, and instanced objects (grass/forests).	
7.2.	Physics Simulations: Basic Cloth, Rigid Body (collisions), and Fluid basics.	
7.3.	Grease Pencil: Integrating 2D hand-drawn elements into a 3D scene.	
Unit 8	RENDERING & COMPOSITING	5 hours
8.1	Engine Comparison: Eevee (Real-time) vs. Cycles (Path Tracing).	
8.2	Render Passes: Exporting AO, Mist, and Shadow passes.	
8.3	Node-Based Compositing: Color correction and post-processing within Blender.	
8.4	Optimization: Reducing noise and render times for production.	
8.5	Blender AI : Introduction to AI Tools in Blender.	
Reference Books:		
- Blender Secrets Author: Jan van den Hemel 3D Modeling Project-Based Approach Publication: Packt Publishing - Blender 3D By Example Author: Oscar Baechler, Xury Soberon - Blender 5.1 Reference Manual https://docs.blender.org/manual/en/latest/index.html		

Title of the Course: ANM-304-MJ Lab Course on ANM-303-MJ								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core	ANM-304-MJ	00	02	02	30	15	35	50
Course Objectives:- ● To master the Blender interface and professional keyboard-driven workflow. ● To understand the complete 3D production pipeline: Modeling, Texturing, Rigging, and Animation. ● To prepare students for industry roles such as 3D Modeler, Texture Artist, or Animator. ● To develop problem-solving skills for technical 3D challenges.								
Course Outcomes:- Student will be able to:- ● Navigate and customize the Blender workspace efficiently. ● Create high-quality 3D assets using various modeling techniques. ● Apply advanced PBR (Physically Based Rendering) textures and materials. ● Build functional character rigs and create fluid animations. ● Execute high-quality renders using Eevee and Cycles engines.								
Course Contents								
1. Create a photorealistic interior corner of a room. Focus on Physical Camera settings (Focal Length/Depth of Field) and Three-Point Lighting.								
2. Create a complex mechanical object (e.g., a vintage camera, a sci-fi crate, or a wristwatch).								
3. Model a simple object (like an old lantern or a wooden chest)								
4. Create a set of 5 modular dungeon or sci-fi hallway pieces (wall, floor, corner, ceiling, door)								
5. Sculpt a stylized character head or a rocky creature in Sculpt Mode.								
6. Use Geometry Nodes to create a forest or a grassy meadow.								
7. Build a functional rig for a mechanical arm or a robotic leg.								
8. Using a provided character rig, animate a seamless walk cycle.								
9. Create a scene involving Rigid Body dynamics (e.g., a wrecking ball hitting a wall) or Cloth Simulation (e.g., a flag waving in the wind or a tablecloth falling over a table).								
10. Create a 5–10 second cinematic sequence.								

Title of the Course: Motion Graphics & Compositing (After Effects)								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(T)	ANM-310-ME	02	00	02	30	15	35	50
Course Objectives:- ● To expose the students to the compositing and visual effects so that they understand the use of compositing software in the world of animation. ● To develop the ability to appreciate ideas and think critically. ● To enhance employability of the students by developing their audio editing skills. ● To revise and reinforce structures already learnt in the previous stages of learning.								
Course Outcomes:- ● Develop compositing skills of the students in the field of animation. ● Encourage the students to VFX world. ● Develop student's imagination and visualization that will help them in animation industry. ● Create awareness about learning styles and college resources, encourage the adoption of study skills, and increase competence in the use of technology so that learners may more effectively achieve academic goals. ● Build cross-cultural understanding and confidence in using 3d environment through collaboration with classmates, increased participation in college activities, and increased interaction within the college and the larger community in order to complete class assignments such as surveys, reports and presentations.								
Course Content								
Unit	Unit Name					Lectures		
Unit 1	Introduction to Adobe After Effects					5		
1.1 Interface of Adobe After Effects 1.2 Customization 1.3 creating composition 1.4 working with layers								
Unit 2	Basic Tools					5		
2.1 Tool bar 2.2 Render settings								

2.3 Various exporting formats		
2.4 Frame rate.		
Unit 3	Chroma Key effects	3
3.1 Chroma removal		
3.2 Compositing		
3.3 Key light and other key		
Unit 4	Applying effects	5
4.1 All Effect controls panels		
4.2 Use of few effects		
4.3 Particles and their use		
Unit 5	Wire Removal & Rotoscopy Techniques	3
5.1 Rotoscopy using masks		
5.2 Clean Plates		
5.3 Create BG Plates		
5.4 Wire Removal		
Unit 6	Tracking	3
6.1 One point tracking		
6.2 2 & 4-point tracking		
6.3 Camera tracking		
Unit 7	Camera	3
7.1 Camera controls		
7.2 Lights		
7.3 Using camera and lights.		
Unit 8	Titling & Rendering	3
8.1 Creating credits		
8.2 Creating motion graphics		
8.3 Adding Comps to the Render Queue & Exploring Key Render Queue Settings		
Reference books: Adobe After Effects Classroom http://oreilly.com/library/view/adobe-after-effects/9780137982691/cover.xhtml or https://helpx.adobe.com/in/after-effects/user-guide.html		

Title of the Course: Lab Course on ANM-310-ME								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(P)	ANM-311-ME	00	02	02	30	15	35	50
Course Objectives:- ● To expose the students to the compositing and visual effects so that they understand the use of compositing software in the world of animation. ● To develop the ability to appreciate ideas and think critically. ● To enhance employability of the students by developing their audio editing skills. ● To revise and reinforce structures already learnt in the previous stages of learning.								
Course Outcomes:- ● Develop compositing skills of the students in the field of VFX animation. ● Encourage the students to VFX world. ● Develop student's imagination and visualization that will help them in animation industry. ● Create awareness about learning styles and college resources, encourage the adoption of study skills, and increase competence in the use of technology so that learners may more effectively achieve academic goals. ● Build cross-cultural understanding and confidence in using 3d environment through collaboration with classmates, increased participation in college activities, and increased interaction within the college and the larger community in order to complete class assignments such as, reports and presentations.								
Practical List								
1. Create an analogue clock animation with moving hour, minute, and second hands using keyframes and rotation properties. 2. Design a realistic rainfall background effect using particle effects and animated layers. 3. Create a radio wave animation background showing expanding circular wave effects with opacity animation. 4. Design a snowfall background scene using particle systems and motion blur effects.								

5. Create a cinematic film title animation for the any film using text effects, transitions, and camera animation.
6. Create a motion graphics video with animated film credits including scrolling text and background effects.
7. Perform Chroma key compositing by removing a green screen background and replacing it with a custom environment.
8. Create an effective composition using multiple layers, blending modes, and adjustment layers for a VFX scene.
9. Remove unwanted wires from footage using masks, clean plates, and cloning techniques.
10. Demonstrate one-point tracking by attaching text or graphics to a moving object in a video.
11. Perform two-point tracking to stabilize or match movement of an object inside footage.
12. Use four-point tracking to replace a moving mobile or TV screen with another video clip.
13. Create a product advertisement animation using text, transitions, logo animation, and motion graphics.
14. Design a social media advertisement for a product using animated typography and visual effects.
15. Create a logo reveal animation using glow, particles, and camera movement effects.
16. Create a 3D camera scene with lights and animate camera movements such as zoom and pan.
17. Design an animated lower-third title for interviews or news videos.
18. Create a promotional intro video using transitions, effects, and background music synchronization.

Student must present Journal of all the given Assignments with color visuals at the end of the Semester.

OR

Title of the Course: Visual Effects (Silhouette)								
Year: III					Semester: V			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(T)	ANM-312-ME	02	00	02	30	15	35	50
Course Objectives:- - To develop understanding of Silhouette (Boris FX) interface and node-based workflow used in VFX production - To acquire skills in fundamental and advanced rotoscoping techniques including shape animation and matte refinement - To learn paint and cleanup techniques such as wire removal, object removal, and clean plate creation - To integrate tracking, roto, and paint workflows for efficient visual effects production - To execute production-level VFX shots and generate industry-ready outputs for portfolio development								
Course Outcomes:- - Ability to navigate and effectively use the Silhouette (Boris FX) interface along with its node-based workflow will be developed - Students will be able to generate precise roto-scoped mattes for both simple and complex shots with proper edge detailing - Learners will gain the capability to perform paint and cleanup tasks, including wire removal and clean plate creation - Competence in integrating roto, paint, and tracking workflows for seamless visual effects output will be achieved - Students will be able to deliver production-quality VFX shots aligned with industry standards and portfolio requirements								
Course Content								
Unit	Unit Name					Lectures		
Unit 1	Fundamentals of Visual Effects & Silhouette					5		
1.1 Introduction to Visual Effects (VFX) and production pipeline 1.2 Overview of Boris FX Silhouette 1.3 Understanding node-based workflow and project setup 1.4 Interface navigation (Viewer, Node Graph, Timeline, Parameter panels) 1.5 Importing footage and image sequences								

1.6 Basic playback, caching, and frame range settings		
1.7 File formats and project management		
Unit 2	Silhouette Fundamentals	5
2.1 Intro to Stabilization		
2.2 Keying Overview using zMatte and Keying Nodes		
2.3 Warping, Morphing		
2.4 Pin Warp, Lens Flare		
2.5 Intro to Depth Node - 2D to 3D Conversion		
Unit 3	Rotoscoping Fundamentals	5
3.1 Introduction to rotoscoping and its applications in VFX		
3.2 Creating and editing shapes (Bezier, B-Spline tools)		
3.3 Keyframing shapes and basic animation		
3.4 Shape hierarchy and layer management		
3.5 Edge control (feathering, falloff, motion blur handling)		
3.6 Basic roto for simple objects (hands, props, foreground elements)		
Unit 4	Advanced Rotoscoping & Tracking Techniques	5
4.1 Tracking-assisted roto (planar and point tracking basics)		
4.2 Roto for complex subjects (hair, motion blur, transparency)		
4.3 Garbage mattes and holdout mattes		
4.4 Matte refinement (motion blur, edge blending, matte cleanup)		
4.5 Using roto nodes in multi-layer compositions		
4.6 Roto Using IK & FK handles		
Unit 5	Paint & Cleanup Techniques	4
4.1 Introduction to paint tools (clone, brush, blur, smear)		
4.2 Wire/rig removal techniques		
4.3 Object removal and clean plate creation		
4.4 Frame-by-frame paint vs. temporal cloning		
4.5 Dust, scratches, and unwanted object cleanup		
4.6 Paint node workflow and layer management		
Unit 6	Advanced Paint, Tracking & Integration	5
5.1 Paint with motion tracking (stabilize and match-move workflows)		

5.2 Advanced object removal using tracked paint

5.3 Integration of roto and paint for seamless compositing

5.4 Multi-pass cleanup workflows

5.5 Working with multiple nodes and render outputs

5.6 Quality control and error checking

Unit 7	Final Project & Showreel Development	1
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Silhouette Roto Showreel Submission (minimum 1 Min, Maximum 2 Min)

Reference books: <https://cdn.borisfx.com/borisfx/store/silhouette/2021-0-1/Silhouette-2021.0.1-UserGuide.pdf>

Title of the Course: Lab course on ANM-312-ME								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(P)	ANM-313-ME	00	02	02	30	15	35	50
Course Objectives:- - To develop skills in Chroma keying and matte extraction using keying tools. - Students will be able to perform tracking and stabilization for footage correction. - To enable creative footage manipulation using warp, morph, and pin tools. - To build proficiency in basic and advanced roto techniques for subject isolation. - To equip learners with skills in cleanup and final compositing, including showreel								
Course Outcomes:- - Students will be able to apply chroma keying techniques to extract clean mattes from footage. - They will demonstrate the ability to perform tracking and stabilization for improving shot quality. - Learners will be able to manipulate footage using warping, morphing, and pin warp techniques. - Students will be capable of executing basic and advanced roto work for complex subjects. - They will be able to perform professional roto-paint tasks, including wire removal and object cleanup.								
Practical List								
- Create a Chroma Key footage using Primatte & zMatte. - Create a Stabilization footage for a character. - Create a footage manipulation using Warping. - Create a footage manipulation using Morphing. - Add a Pin Warp on the footage for Character shape manipulation. - Create a Basic Roto for simple objects (hands, props, foreground elements) - Create an Advance Roto for complex subjects (hair, motion blur, transparency) - Create a Wire/Rig removal footage for a character. - Create an Advance object removal using tracked paint. - Create a Final Roto-Paint Showreel with added non-copyright music and titling (minimum 1 Min, Maximum 2 Min)								
<i>Student must present Journal of all the given Assignments with color visuals at the end of the Semester.</i>								

Title of the Course: 3D Sculpting (ZBrush)								
Year: III					Semester: V			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
VSC 2(T/P)	ANM-321 VSC	00	02	02	30	15	35	50
Course Objectives:- •To understand ZBrush interface and basic digital sculpting techniques. • To develop 3D modeling and detailing skills using tools like ZSphere, Dynamesh, and brushes. • To apply posing, lighting, and material techniques for visual presentation. • To learn rendering, passes, and final output for portfolio creation.								
Course Outcomes:- • Apply ZBrush interface and basic tools to create and manage 3D models. • Develop detailed 3D models using sculpting techniques, brushes, alphas, and ZSphere workflow. • Create visually effective models using posing, lighting, and material techniques. • Generate final rendered outputs using BPR, render passes, and export for portfolio/showreel								
Course Content								
Unit	Unit Name					Lectures		
Unit 1	Introduction To Zbrush & Interface					3		
1.1 ZBrush Interface Layout & Controls								
1.2 Working with canvas and documents								
1.3 Interface Elements & Navigation basics (rotate, zoom, pan)								
Unit 2	Introduction to 3D Tools & Primitives					5		
2.1 Working with 3D ZTools								
2.2 Standard Primitives								
2.3 Polymesh 3D & Base Head Creation								
2.4 Sculpting Controls, Symmetry & Dynamics								
Unit 3	Advanced Brushes, Alpha & Surface Detailing					6		
3.1 Types of Brushes for Detailing								
3.2 Alpha & Stamp surface texture imprint,skin, scales, wrinkles)								
3.3 Dynamesh Project & Brush Controls(Alpha settings, stroke types, Masking)								
3.4 Custom Brushes, Masking & Transform Tools								
3.5 Sculpting Anatomy Parts (Face & Details)								
3.6 Wings, Muscles & ShadowBox								
Unit 4	Modeling with ZSphere chain					6		

4.1 Introduction to ZSphere & Basic Setup 4.2 ink, Bones & Hierarchy 4.3 Skinning & Mesh Generation 4.4 Sculpting with Dynamesh & Brushes 4.5 Detailing with Alpha & IMM Brushes		
Unit 5	Principles of Posing & Techniques	3
5.1 Principles of posing and posing Techniques(Use of Transpose move or rotate tool according the pose) 5.2 Lighting Setup & 3-Point Lighting 5.3 Changing the color of the light		
Unit 6	Rendering	2
6.1 ZBrush Rendering & BPRFinal 3D Showreel Submission & Render Settings 6.2 Render Passes & Export(Shadow, Ambient Occlusion, SSS)		
Reference books: Getting Started ZBrush Author :Greg Johnson		

2D Animate
Course Content
Guidelines for Project: - Students have to create a short 2D animated project based on a selected theme, story, or concept. At the end of the project students have to create a case study and upload their work on Behance or any portfolio platform. - At the end of the project students have to print their portfolio/project sheets and showcase their work to the exam panel. Students have to create the following: - Research and inspiration boards. - Story concept and script writing. - Character design and background design. - Storyboarding and animatic. - Asset creation and scene setup. 2D animation sequences. - Sound effects and basic editing. - Final rendering and presentation. - Mockups, posters, and comparison visuals.
OR
3D Maya
Course Content
Guidelines for Project: - Students have to create a 3D project using Maya based on product visualization, environment design, character modeling, or animation. - At the end of the project students have to create a case study and upload their work on Behance or any portfolio platform. - At the end of the project students have to print their portfolio/project sheets and showcase their work to the exam panel. Students have to create the following: - Research and reference collection. - Concept sketches and mood boards. 3D modeling of objects/characters/environment. - UV mapping and texturing. - Lighting and camera setup. - Rendering and compositing. - Basic animation/rigging setup. - Final rendered outputs and presentation boards. - Mockups and comparison visuals.

OR
Blender
Course Content
Guidelines for Project: • Students have to create a 3D creative project using Blender based on animation, product visualization, environment design, motion graphics, or character creation. • At the end of the project students have to create a case study and upload their work on Behance or any portfolio platform. • At the end of the project students have to print their portfolio/project sheets and showcase their work to the exam panel. Students have to create the following: • Research and inspiration boards. • Concept development and sketches. • 3D modeling/sculpting. • Materials, textures, and shading. • Lighting and rendering setup. • Animation and visual effects. • Compositing and final output rendering. • Presentation boards and mockups. <i>Student must present Journal of all the given Assignments with color visuals at the end of the Semester.</i>

Title of the Course: ANM-341-ME White Board Animation and Sketch Up Design								
Year: III				Semester: V				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Minor 2 (T)	ANM-341-ME	02	00	02	30	15	35	50
Course Objectives: ● Understand the fundamentals of whiteboard animation and digital visual storytelling. ● Learn the tools and interface of animation software such as VideoScribe and SketchUp. ● Develop skills in creating animated educational and promotional content. ● Apply camera controls, transitions, effects, and timeline editing in animation projects. ● Design and model basic to advanced 3D objects using SketchUp. ● Integrate graphics, audio, charts, and voice-over into animation projects. ● Create professional whiteboard animation videos and 3D presentations. ● Enhance creativity, visualization, and presentation skills through project-based learning.								
Course Outcomes:- ● Understand the fundamentals of whiteboard and explainer video animation. ● Create basic animation projects using Video Scribe. ● Apply camera movements, transitions, and timeline editing techniques. ● Design professional explainer videos with graphics, charts, GIFs, and audio integration.								
Course Content								
Unit	Unit Name						Lectures	
Unit 1	Video Scribe Course Introduction						3	
	1.1 What is Video Scribe? 1.2 Overview of the Project Screen. 1.3 Customizing the Default Settings. Creating a New Project. 1.4 Brief overview of the Tools and Saving the Project.							
Unit 2	Whiteboard Animation Basics						3	
	2.1 Changing the Default Drawing Hand. 2.2 Canvas Color and Texture. 2.3 Adding the First Image and Adjusting it. Image Properties. 2.4 Adding Text. 2.5 More Text Properties and Exporting Your Video.							
Unit 3	Camera Settings, Transitions and Timeline Edits						3	

3.1 Camera Settings. 3.2 More Camera Settings and Creating a New Scene 3.3 Timeline and Relocating Copied Elements. 3.4 Drawing Elements without Hand Leaving the Screen.		
Unit 4	Charts, Graphs, Colors and More Effects	6
4.1 Charts and their types. 4.2 Importing Charts from Microsoft Excel etc. 4.3 The Erase Effect. 4.4 Problem with the Erase Effect and its Solution. 4.5 Using HEX Codes to Generate any Color. 4.6 Graphic Enhancements and Filter Effects. 4.7 GIF Files in VideoScribe. 4.8 Making our own GIF files and Importing to VideoScribe. 4.9 Recoding Voice Over. 4.10 Closing Remarks.		
Unit 5	Introduction to SketchUp Design	4
5.1 Introduction to Sketch Up Interface 5.2 Navigation and Workspace Setup 5.3 Drawing Basic 2D Shapes 5.4 Push/Pull Tool and 3D Object Creation 5.5 Line, Arc, Rectangle and Circle Tools 5.6 Selection and Modification Tools, Components and Groups 5.7 Importing and Exporting Models, Measurements and Scale Setup		
Unit 6	3D Modeling and Architectural Design in SketchUp	5
6.1 Creating 3D Architectural Models 6.2 Interior and Exterior Design Basics 6.3 Materials and Textures, Lighting and Shadow Settings 6.4 Creating Doors, Windows and Furniture Models 6.5 Scene Management and Layering 6.6 Using SketchUp Warehouse Models 6.7 Basic Rendering Concepts 6.8 Dimensioning and Annotation		
Unit 7	Advanced Animation and Multimedia Integration	3
7.1 Advanced Timeline Management, Multi-scene Animation Projects 7.2 Audio Editing and Background Music, Lip-sync and Character Animation Basics 7.3 Green Screen Concepts 7.4 Branding and Logo Animation		
Unit 8	Project Development and Portfolio Creation	3
8.1 Planning Animation Projects, Script Writing and Storyboarding 8.2 Educational and Commercial Animation Design 8.3 3D Presentation Development, Rendering and Video Compression 8.4 Portfolio Preparation, Publishing on Digital Platforms 8.5 Client Presentation Techniques 8.6 Final Mini Project / Case Study		
	Reference Books	

White Board Animation

<https://www.slideshare.net/slideshow/whiteboard-animation-149641779/149641779>

<https://www.scribd.com/document/336657703/How-to-Design-Your-Own-Whiteboard-Animation>

SketchUp for Interior Design :

<https://download.e-bookshelf.de/download/0000/8329/56/L-G-0000832956-0002854809.pdf>

B.SC. Animation
SEM VI

Title of the Course: ANM-351-MJ - Visual Effects-I (Nuke)								
Year: III					Semester: VI			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 4 (T)	ANM-351-MJ	04	00	04	60	30	70	100
Course Objectives:- - To understand the fundamentals of VFX pipeline and node-based compositing workflow using Nuke. - To develop skills in keying, rotoscoping, tracking, and 2D compositing for creating seamless visual effects. - To apply color correction, matte extraction, and image enhancement techniques for professional-quality outputs. - To explore 3D compositing, matchmoving, and advanced compositing techniques used in film and digital media. - To create a final VFX project and showreel demonstrating industry-relevant compositing skills.								
Course Outcomes:- - Understand and apply the VFX pipeline and node-based compositing workflow to develop basic compositing outputs in Nuke. - The student will be able to perform keying, rotoscoping, and matte extraction techniques for integrating visual elements into footage. - Apply 2D compositing, color correction, and filtering techniques to enhance and balance digital images. - The student will be able to utilize tracking, matchmoving, and basic 3D compositing tools for realistic scene integration. - Create and present a final composited VFX shot and showreel, demonstrating practical and industry-relevant skills.								
Course Content								
Unit	Unit Name					Lectures		
Unit 1	Introduction to VFX & Nuke Workflow					5		
1.1	Introduction to VFX & Digital Compositing							
1.2	VFX pipeline overview							
1.3	Role of Compositor in film/OTT/games							

1 . 4 Node-based vs Layer-based compositing 1 . 5 Nuke Interface (Viewer, Node Graph, Properties) 1 . 6 Read node, Write Node, Import, Export, Project saving		
Unit 2	Keying & Matte Extraction	5
2.1 Chroma keying (Green/Blue screen) 2.2 Keying nodes (Keylight, Primatte, IBK) 2.3 Edge blending & despill 2.4 Matte Creation and Manipulation, Matte refinement 2.5 Matting Techniques, Procedural Matte Extraction		
Unit 3	Rotoscopy & Paint (Cleanup Techniques)	8
3.1 Introduction to Roto Node and tools 3.2 Rotopaint (clone, reveal, repair), Hair Roto 3.3 Garbage mattes & edge refinement, Alpha Channel 3.4 Introduction to Paint, Clean plate 3.5 Clean plate creation, wire removal		
Unit 4	Fundamental of 2D Compositing & Color Correction	10
4.1 Introduction to 2D compositing 4.2 Merge Node, transform Node 4.3 Colour Corrections, Filters & Effects (Blur, Sharpen, Edge Blur, Glow) 4.4 Color theory & grading (Exposure, contrast, gamma) 4.5 Layering and Shot Building 4.6 Render Output, Render settings, File formats (JPG, PNG, EXR, MOV)		
Unit 5	Tracking & Matchmoving	8
5.1 Tracking, Tracker Node, Corner pin 2D 5.2 Stabilization & match move 5.3 Planar tracking basics, Screen Tracking		

5.4 Introduction to camera tracking 5.5 Tracking Multiple Points (2 Point & 4 Point)		
Unit 6	3D Compositing in Nuke	10
6.1 3D workspace (camera, lights, geometry) 6.2 Intro to 3D Nodes, Scanline Render, Ray Render 6.3 Cards, projections & textures 6.4 Camera projection techniques 6.5 Set extensions		
Unit 7	Advanced Compositing	12
7.1 Animation, Timeline control, Keyframe Indication, Curve Editor, Dope sheet 7.2 Particle system, Crowd Duplication 7.3 Composite CG render passes, Multi-pass compositing, Depth compositing 7.4 Light wrap & integration techniques 7.5 Motion blur & lens effects 7.6 Introduction to Ai in Nuke 7.7 Ai Upscaling & Denoising (Quality Improvement) 7.8 Ai Motion Track (Smart Vector)		
Unit 8	Nuke Showreel Development	2
Nuke Showreel Submission Including all the Nuke assignment presentation with Music and Title (minimum 1 Min, Maximum 2 Min)		
Reference books: 1 . Digital Compositing with Nuke Author: Lee Lanier 2 . https://learn.foundry.com/nuke/content/user_guide.html		

Title of the Course: Lab course on ANM-351-MJ								
Year: III				Semester: VI				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 2 (P)	ANM-352-MJ	00	02	02	30	15	35	50
Course Objectives:- - To understand the fundamentals of VFX pipeline and node-based compositing workflow using Nuke. - To develop skills in keying, rotoscoping, tracking, and 2D compositing for creating seamless visual effects. - To apply color correction, matte extraction, and image enhancement techniques for professional-quality outputs. - To explore 3D compositing, matchmoving, and advanced compositing techniques used in film and digital media. - To create a final VFX project and showreel demonstrating industry-relevant compositing skills.								
Course Outcomes:- - Understand and apply the VFX pipeline and node-based compositing workflow to develop basic compositing outputs in Nuke. - The student will be able to perform keying, rotoscoping, and matte extraction techniques for integrating visual elements into footage. - Apply 2D compositing, color correction, and filtering techniques to enhance and balance digital images. - The student will be able to utilize tracking, matchmoving, and basic 3D compositing tools for realistic scene integration. - Create and present a final composited VFX shot and showreel, demonstrating practical and industry-relevant skills.								
Practical List								
- Working with Chroma Keying - Character Rotoscopy - Working with Hair Rotoscopy - Adding/Removing Object with Paint (Cleanplate) - Day to Night Conversion & Color Grading - Scene creation using 2D Compositing								

7. Multi Point & 4-Point Tracking
8. Camera Tracking & Stabilization
9. Scene creation using 3D Compositing
10. Create scenes using Fire-smoke & Rain particles
11. Create scene with Crowd Duplication
12. Produce a camera projection shot with slight camera movement
13. Create a scene with Water Simulation using Distort Node & Heat distortion
14. Create a Scene with Z-depth, depth-based blur and atmosphere.
15. Create a Scene using light wrap to integrate foreground with background.
16. Perform object removal using AI Smart Vectors.
17. Enhance footage using AI upscaling and denoising.
18. Showreel submission(Including before after shot for above 17 assignments) Minimum 1 min
& Maximum 2 min

Reference books:

1. Digital Compositing with Nuke **Author:** Lee Lanier
2. https://learn.foundry.com/nuke/content/user_guide.html

Title of the Course: Augmented Reality (AR) (Unity)								
Year: III				Semester: VI				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 4(T)	ANM-353-MJ	04	00	04	60	30	70	100
Course Objectives:- ● Understand the fundamentals of Augmented Reality (AR), Unity, and AR development workflows. ● Develop interactive AR applications using Unity, C#, AR Foundation, ARCore, and ARKit. ● Implement AR features such as plane detection, image tracking, object placement, and user interactions. ● Create advanced AR experiences using face tracking, environmental understanding, occlusion, and cloud-based AR technologies. ● Build, optimize, and deploy industry-ready AR applications for Android and iOS platforms while developing a professional project portfolio.								
Course Outcomes:- ● Develop Augmented Reality applications using Unity and C# programming.. ● Implement AR functionalities such as plane detection, image tracking, object placement, and interactive user controls. ● Design and integrate 3D assets, animations, and user interfaces into AR experiences. ● Apply advanced AR features including face tracking, environmental understanding, and cloud-based AR solutions. ● Utilize dynamics and simulation tools such as particles, cloth, hair, and fluids for visual effects.								
Course Content								
Unit	Unit Name						Lectures	
Unit 1	Introduction to Augmented Reality and Unity						5	
1.1 Introduction to Augmented Reality 1.2 Understanding the AR Ecosystem 1.3 Introduction to Unity 1.4 Unity Project Structure 1.5 Building Your First Unity Scene								
Unit 2	Unity Fundamentals						5	
2.1 Unity GameObjects and Components 2.2 Understanding Coordinate Systems 2.3 Materials and Textures 2.4 Lighting in Unity 2.5 Camera Fundamentals								

Unit 3	C# Programming for AR Development	5
3.1 Introduction to C# 3.2 Conditional Statements 3.3 Loops and Arrays 3.4 Functions and Classes 3.5 Unity Scripting Basics		
Unit 4	3D Concepts for AR	5
4.1 Basics of 3D Graphics 4.2 3D Models and Meshes 4.3 Importing 3D Models 4.4 Materials and Shaders 4.5 Animation Fundamentals		
Unit 5	Introduction to AR Foundation	5
5.1 AR Foundation Overview 5.2 ARCore and ARKit 5.3 Installing AR Foundation Packages 5.4 Setting up AR Session 5.5 Creating Your First AR App		
Unit 6	Plane Detection and Object Placement	5
6.1 Understanding Plane Detection 6.2 Raycasting in AR 6.3 Object Placement System 6.4 Object Anchoring		
Unit 7	AR Interaction Techniques & Image Tracking AR	10
7.1 Gesture-Based Interaction 7.2 Scaling AR Objects 7.3 Rotation Controls 7.4 Object Selection Techniques 7.5 Introduction to Image Tracking 7.6 Reference Image Libraries 7.8 Detecting and Tracking Images 7.9 Displaying 3D Content on Images		

Unit 8	Face Tracking and Human Tracking	5
8.1 Face Tracking Fundamentals 8.2 AR Face Manager 8.3 Creating Face Filters 8.4 Human Body Tracking		
Unit 9	Advanced AR Features	5
9.1 Environment Understanding 9.2 Occlusion in AR 9.3 Light Estimation 9.4 Persistent AR Experiences		
Unit 10	Face Tracking and Human Tracking	10
10.1 Final Industry-Level AR Project		

Title of the Course: Lab Course on ANM-353-MJ								
Year: III					Semester: VI			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 2 (P)	ANM-354-MJ	00	02	02	30	15	35	50

Course Objectives:-

- Understand the fundamentals of Augmented Reality (AR) and Unity by creating interactive 3D scenes using GameObjects, components, lighting, cameras, materials, and textures.
- Develop programming skills using C# in Unity to implement object behavior, user interactions, control structures, functions, classes, and scripting for AR applications.
- Design and integrate 3D assets and animations by importing models, applying materials and shaders, and creating interactive visual experiences in Unity.
- Build AR applications using AR Foundation by implementing plane detection, object placement, anchoring, gesture-based interaction, image tracking, face tracking, and human body tracking.
- Create industry-level AR solutions by incorporating advanced AR features such as environment understanding, occlusion, light estimation, persistent AR experiences, and complete interactive AR workflows.

Course Outcomes:-

- Create and manage Unity projects by utilizing GameObjects, components, cameras, lighting systems, materials, textures, and 3D assets for interactive applications.
- Apply C# programming concepts, including variables, loops, conditional statements, arrays, functions, classes, and Unity scripting to develop AR functionalities.
- Develop AR applications using AR Foundation by implementing plane detection, raycasting, object placement, anchoring, and real-time interaction techniques.
- Design advanced AR experiences using image tracking, face tracking, human body tracking, gesture controls, and interactive 3D content integration.
- Build and deploy industry-standard AR applications that incorporate environment understanding, occlusion, light estimation, persistent AR experiences, and user-centered interaction systems.

Practical List
1. Create a basic Unity scene containing primitive objects, lighting, and a camera setup. 2. Create a scene using different Game Objects and apply components such as Transform, Mesh Renderer, and Collider. 3. Apply materials and textures to 3D objects and create an effective lighting setup.

4. Demonstrate object movement using Unity's coordinate system and configure multiple camera views.
5. Create scripts demonstrating variables, loops, conditional statements, arrays, functions, and classes.
6. Import a 3D model into Unity and organize assets properly.
7. Apply custom materials/shaders and create a simple object animation.
8. Install AR Foundation and configure an AR-enabled Unity project
9. Create an AR application that detects surfaces and displays a simple 3D object.
10. Develop an AR app that detects horizontal planes and allows object placement using raycasting.
11. Place and anchor virtual objects so that they remain fixed in the real-world environment.
12. Implement touch gestures to move, rotate, scale, and select AR objects.
13. Create an AR application that detects a predefined image and displays 3D content on top of it.
14. Develop a face filter application that overlays virtual content on a user's face.
15. Create an AR application that tracks human body movement and displays virtual content accordingly.
16. Develop an AR experience using Environment Understanding, Occlusion, Light Estimation, and Persistent AR features.
17. Design and develop a complete industry-level AR application integrating the following features:

(AR Foundation Setup, Plane Detection, Object Placement, Gesture Controls, Image Tracking, Face Tracking or Human Tracking, Lighting and Occlusion, User Interaction System)

Reference books:

1. Basic Unity Scene Creation- Unity in Action – Joe Hocking
2. Learning C# by Developing Games with Unity – Harrison Ferrone
3. Materials, Shaders & Animation- Unity 2022 Shaders and Effects Cookbook – John P. Doran

Title of the Course: Visual Effects II (Silhouette)								
Year: III					Semester: VI			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(T)	ANM-360-ME	02	00	02	30	15	35	50
Course Objectives:- - To develop understanding of Silhouette (Boris FX) interface and node-based workflow used in VFX production - To acquire skills in fundamental and advanced rotoscoping techniques including shape animation and matte refinement - To learn paint and cleanup techniques such as wire removal, object removal, and clean plate creation - To integrate tracking, roto, and paint workflows for efficient visual effects production - To execute production-level VFX shots and generate industry-ready outputs for portfolio development								
Course Outcomes:- - Ability to navigate and effectively use the Silhouette (Boris FX) interface along with its node-based workflow will be developed - Students will be able to generate precise roto-scoped mattes for both simple and complex shots with proper edge detailing - Learners will gain the capability to perform paint and cleanup tasks, including wire removal and clean plate creation - Competence in integrating roto, paint, and tracking workflows for seamless visual effects output will be achieved - Students will be able to deliver production-quality VFX shots aligned with industry standards and portfolio requirements								
Course Content								
Unit	Unit Name					Lectures		
Unit 1	Fundamentals of Visual Effects & Silhouette					5		
1.1 Introduction to Visual Effects (VFX) and production pipeline 1.2 Overview of Boris FX Silhouette 1.3 Understanding node-based workflow and project setup 1.4 Interface navigation (Viewer, Node Graph, Timeline, Parameter panels) 1.5 Importing footage and image sequences								

1.6 Basic playback, caching, and frame range settings 1.7 File formats and project management		
Unit 2	Silhouette Fundamentals	5
2.1 Intro to Stabilization 2.2 Keying Overview using zMatte and Keying Nodes 2.3 Warping, Morphing 2.4 Pin Warp, Lens Flare 2.5 Intro to Depth Node - 2D to 3D Conversion		
Unit 3	Rotoscoping Fundamentals	5
3.1 Introduction to rotoscopying and its applications in VFX 3.2 Creating and editing shapes (Bezier, B-Spline tools) 3.3 Keyframing shapes and basic animation 3.4 Shape hierarchy and layer management 3.5 Edge control (feathering, falloff, motion blur handling) 3.6 Basic roto for simple objects (hands, props, foreground elements)		
Unit 4	Advanced Rotoscoping & Tracking Techniques	5
4.1 Tracking-assisted roto (planar and point tracking basics) 4.2 Roto for complex subjects (hair, motion blur, transparency) 4.3 Garbage mattes and holdout mattes 4.4 Matte refinement (motion blur, edge blending, matte cleanup) 4.5 Using roto nodes in multi-layer compositions 4.6 Roto Using IK & FK handles		
Unit 5	Paint & Cleanup Techniques	4
4.1 Introduction to paint tools (clone, brush, blur, smear) 4.2 Wire/rig removal techniques 4.3 Object removal and clean plate creation 4.4 Frame-by-frame paint vs. temporal cloning 4.5 Dust, scratches, and unwanted object cleanup 4.6 Paint node workflow and layer management		
Unit 5	Advanced Paint, Tracking & Integration	5

5.1 Paint with motion tracking (stabilize and match-move workflows)

5.2 Advanced object removal using tracked paint

5.3 Integration of roto and paint for seamless compositing

5.4 Multi-pass cleanup workflows

5.5 Working with multiple nodes and render outputs

5.6 Quality control and error checking

Unit 7

Final Project & Showreel Development

1

Silhouette Roto Showreel Submission (minimum 1 Min, Maximum 2 Min)

Reference books: <https://cdn.borisfx.com/borisfx/store/silhouette/2021-0-1/Silhouette-2021.0.1-UserGuide.pdf>

Title of the Course: Lab course on ANM-360-ME								
Year: III					Semester: VI			
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Core 2 (P)	ANM-361-MJ	00	02	02	30	15	35	50

Course Objectives:-

- To understand the fundamentals of VFX pipeline and node-based compositing workflow using Nuke.
- To develop skills in keying, rotoscoping, tracking, and 2D compositing for creating seamless visual effects.
- To apply color correction, matte extraction, and image enhancement techniques for professional-quality outputs.
- To explore 3D compositing, matchmoving, and advanced compositing techniques used in film and digital media.
- To create a final VFX project and showreel demonstrating industry-relevant compositing skills.

Course Outcomes:-

- Understand and apply the VFX pipeline and node-based compositing workflow to develop basic compositing outputs in Nuke.
- The student will be able to perform keying, rotoscoping, and matte extraction techniques for integrating visual elements into footage.
- Apply 2D compositing, color correction, and filtering techniques to enhance and balance digital images.
- The student will be able to utilize tracking, matchmoving, and basic 3D compositing tools for realistic scene integration.
- Create and present a final composited VFX shot and showreel, demonstrating practical and industry-relevant skills.

Practical List
1. Working with Chroma Keying 2. Character Rotoscopy 3. Working with Hair Rotoscopy 4. Adding/Removing Object with Paint (Cleanplate) 5. Day to Night Conversion & Color Grading 6. Scene creation using 2D Compositing 7. Multi Point & 4-Point Tracking 8. Camera Tracking & Stabilization 9. Scene creation using 3D Compositing 10. Create scenes using Fire-smoke & Rain particles 11. Create scene with Crowd Duplication 12. Produce a camera projection shot with slight camera movement

- | |
|---|
| <ol style="list-style-type: none">13. Create a scene with Water Simulation using Distort Node & Heat distortion14. Create a Scene with Z-depth, depth-based blur and atmosphere.15. Create a Scene using light wrap to integrate foreground with background.16. Perform object removal using AI Smart Vectors.17. Enhance footage using AI upscaling and denoising.18. Showreel submission(Including before after shot for above 17 assignments) Minimum 1 min & Maximum 2 min |
| <p>Reference books:</p> <ol style="list-style-type: none">3 . Digital Compositing with Nuke Author: Lee Lanier4 . https://learn.foundry.com/nuke/content/user_guide.html |

Title of the Course: Motion Graphics & Compositing (After Effects)

Year: III

Semester: VI

Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(T)	ANM-362-ME	02	00	02	30	15	35	50

Course Objectives:-	
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- To expose the students to the compositing and visual effects so that they understand the use of compositing software in the world of animation.
- To develop the ability to appreciate ideas and think critically.
- To enhance employability of the students by developing their audio editing skills.
- To revise and reinforce structures already learnt in the previous stages of learning.

Course Outcomes:-

- Develop composing skills of the students in the field of animation.
- Encourage the students to VFX world.
- Develop student's imagination and visualization that will help them in animation industry.
- Create awareness about learning styles and college resources, encourage the adoption of study skills, and increase competence in the use of technology so that learners may more effectively achieve academic goals.

- Build cross-cultural understanding and confidence in using 3d environment through collaboration with classmates, increased participation in college activities, and increased interaction within the college and the larger community in order to complete class assignments such as , reports and presentations.

Course Content

Unit	Unit Name	Lectures
Unit 1	Advanced Interface & Workflow Management	5
1.1. New features in After Effects 2026 1.2. Custom workspace creation 1.3. Project organization techniques 1.4. Advanced timeline controls 1.5. Import/export optimization 1.6. Dynamic Link with Premiere Pro 1.7. Keyboard shortcuts & workflow speedup		
Unit 2	Advanced Animation Principles	5
2.1 Motion principles 2.2 Graph Editor mastery 2.3 Speed graph & value graph 2.4 Easy Ease advanced techniques 2.5 Parenting & null objects 2.6 Motion smoothing 2.7 Camera movement animation		
Unit 3	Motion Graphics Design	3
3.1 Shape layers advanced tools 3.2 Motion graphics templates 3.3 Infographics animation 3.4 Typography animation 3.5 Lower thirds & broadcast graphics 3.6 Essential Graphics Panel		
Unit 4	Visual Effects & Compositing	5
4.1 Green screen keying 4.2 Rotoscoping 4.3 Mask tracking 4.4 Blend modes 4.5 Chroma key 4.6 Advanced compositing 4.7 Matte techniques 4.8 Object removal		

Unit 5	Working With Audio	2
5.1	Understanding Audio in Motion Graphics	
5.2	Previewing and Mixing Audio	
5.3	Enhancing Audio Tracks with Effects	
Unit 6	Animation Basics	3
6.1	Importing Illustrator or Photoshop Files	
6.2	Animating Opacity , Understanding Anchor Points	
6.3	Animating Position ,Animating Rotation, Animating Scale	
6.4	The Puppet Tool , Copy and Paste Key frames , Animation Sort cuts	
Unit 7	Creating And Animating Text	2
7.1	Creating and Editing Text	
7.2	Applying Text Animation Presets	
7.3	Animating Text Manually	
7.4	Applying Layer Styles to Texts	
Unit 8	Professional Project & Rendering	5
8.1	Render Queue	
8.2	Adobe Media Encoder	
8.3	Export settings	
8.4	Social media formats	
8.5	Broadcast export	
8.6	Portfolio creation	
8.7	Freelancing workflow	
8.8	Client project management	
Reference books: Adobe After Effects Classroom in a Book 2026 https://ptgmedia.pearsoncmg.com/images/9780135561430/samplepages/9780135561430_Sample.pdf or https://helpx.adobe.com/in/after-effects/user-guide.html		

Title of the Course : Lab Course on ANM-362-ME								
Year: III				Semester: VI				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
Major Elective 2(P)	ANM-363-ME	00	02	02	30	15	35	50

Course Objectives:-

- To expose the students to the compositing and visual effects so that they understand the use of compositing software in the world of animation.
- To install human values and develop the character of the students as responsible citizens of the world.
- To develop the ability to appreciate ideas and think critically.
- To enhance employability of the students by developing their audio editing skills.
- To revise and reinforce structures already learnt in the previous stages of learning.

Course Outcomes:-

- Develop compositing skills of the students in the field of animation.
- Encourage the students to VFX world.
- Develop student’s imagination and visualization that will help them in animation industry.
- Create awareness about learning styles and college resources, encourage the adoption of study skills, and increase competence in the use of technology so that learners may more effectively achieve academic goals.
- Build cross-cultural understanding and confidence in using 3d environment through collaboration with classmates, increased participation in college activities, and increased interaction within the college and the larger community in order to complete class assignments such as surveys, reports and presentations.

Practical List
1. Create a social media ad using animated text and effects.

2. Animate an Analog clock with moving hands.
3. Replace a moving screen using four-point tracking.
4. Create a cinematic film title animation.
5. Design a snowfall scene with particle effects.
6. Attach text to a moving object using tracking.
7. Create a promotional intro with synced music.
8. Remove a green screen and add a new background.
9. Create animated radio wave effects.
10. Design an animated lower-third title.
11. Create a realistic rainfall background effect.
12. Stabilize footage using two-point tracking.
13. Create a product advertisement animation.
14. Design a VFX scene using multiple layers.
15. Create a 3D camera animation with lights.
16. Remove unwanted wires from footage.
17. Create a glowing logo reveal animation.
18. Create animated scrolling film credits.

Student must present Journal of all the given Assignments with color visuals at the end of the Semester.

3. Animation & Design Projects
4. Credits (mention your role clearly)
5. Contact Details at End

4. Audio & Music

- * Use clean background music.
- * Avoid copyrighted or loud music.
- * Audio should not overpower visuals.
- * Sync cuts with music if possible.

5. Important Instructions

- * Include only original work created by student.
- * Avoid low-quality or incomplete projects.
- * Do not add unnecessary effects or transitions.
- * Mention software used if required.
- * Use proper titles and credits.
- * Maintain professional presentation.

6. Submission Medium

Students can submit showreel through:

- * YouTube/Vimeo/Artstation/Behance/Dribbble or own website Link

Common Mistakes to Avoid

- * Very long showreel
- * Repetitive clips
- * Poor rendering quality
- * Too much text
- * Shaky or unclear visuals
- * Using copied content
- * Slow intro

Project Guidelines

Project must be completed in a group of 3 to 4 students only. Every student must actively participate in the project work. Individual projects will not be accepted unless approved by department.

1. Types of Projects

Students may select any one of the following:

2. Animation Projects

2D/3D Animated Short Film, Motion Graphic, VFX short film etc.

3. Project Duration

- * Final Output Duration: **3 to 7 minutes**
- * Motion Graphics/Advertisement Projects: **1 to 3 minutes**

4. Project Workflow

Students should follow proper production pipeline:

- Pre-Production
- Production
- Post-Production

5. Mandatory Submission Materials

Each group must submit: Softcopy and Hardcopy of Pre-Production work

Final Output: Video format

6. Team Responsibilities

Every member should have a clear role such as:

- * Director
- * Animator
- * Designer
- * Editor
- * Script Writer
- * Sound Editor

Students must mention individual contribution in report and presentation.

7. Important Instructions

- * Use only original content. * Avoid copyright material. * Maintain proper file backup.
- * Submit project before deadline. * Late submissions may not be accepted. * Keep project professional and meaningful.

Title of the Course: On Job Training								
Year: III				Semester: VI				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
OJT	ANM-381-OJT	00	04	04	120	30	70	100

Guidelines for on Job Training:

1. Nature of On Job Training Programme:

Student on Job Training Programme has to undergo for **One hundred Twenty hours** of practical training in business establishments. The list of these establishments will be provided by the college or university. In case, a student is unable to join the enlisted establishment, he/ she can choose an establishment in consultation with the concerned teacher based on their specialization or as per the availability of the company/firm.

2. Salient features of On Job Training Programme

The fundamental framework of On Job Training is as below:

- The On Job Training (OJT) is of **Four Credits**.
- On Job Training (OJT) will be of **One Hundred Twenty clock hours**.
- The On Job Training (OJT) has to be completed during the Semester VI.
- Student has On Job Training Programme, it is mandatory to complete the On Job Training as per prescribed standards.
- A student is entitled to a 'Completion Certificate' after successful completion of the On Job Training (OJT).
- A student is solely responsible for his behavior in the business establishment during the On Job Training (OJT)

3. Subjects available for On Job Training Programme

A student On Job Training Programme in the Discipline Specific Special Subject which he / has to do in Sem VI. List of the Discipline Specific Special Subject given below:

2D/3D Animation, VFX, Graphic Design, Video Editing, UI/UX, Game Design

Guidelines for Teachers

The National Assessment and Accreditation Council also emphasize On Job Training as a part of effective curriculum delivery. The number of students undergoing On Job Training will certainly aid colleges to secure better grades during evaluation.

For effective implementation of the On Job Training, it is advised that the concerned department institute an 'On Job Training Execution Cell'. The cell will plan and implement the On Job Training according to the guidelines issued by the university. The cell is also expected to monitor and review the progress and outcomes of the programme with regular intervals and make necessary changes.

Evaluation and credits

Savitribai Phule Pune University is committed to prepare students for the jobs of the future, which will require a combination of technical skills, problem-solving abilities, and creativity and to achieve this industrial on the Job training plays crucial role. Student has to submit project based on job training and it is evaluated based on successful completion of the student's submission of the comprehensive project report with required documents. The project report prepared by the student will be known as the output of on-the-job training experience. The Comprehensive Project report based on (OJT) carries 04 credits, and carries 100 marks, divided into two parameters

Internal Evaluation (30 Marks)	External Evaluation (Marks 70)
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As the On-the-Job training Project report is based on the self-study done by the candidate and evaluated for 100 marks altogether, 04 credits will be awarded to a successful candidate in this subject. The Project report based on OJT (the Job Training) shall be evaluated by two examiners one internal and one external (Subject Expert from Outside College). A Viva voce must be conducted by the panel consisting of Internal Examiner and External Examiner.

Guidelines for Teachers

During – On Job Training Functions

Teachers need to contact the On Job Training providing organisations at regular intervals during the On Job Training (OJT) to review following matters: -

- a. Regularity / punctuality of student
- b. Behaviour / soft skills
- c. Inclination to learn new things
- d. Ability to put theory into practice
- e. Ability to take initiative for problem solving
- f. Commitment to the assigned task
- g. Overall progress and performance (Whether satisfactory or not)

SUBMISSION OF ON JOB TRAINING (OJT) REPORT

The student must prepare and submit a comprehensive Report based on his/her learning at On Job Training to the College.

The OJT Report structure should consist of;

- Title Page
- Acknowledgement
- Letter to On Job Training Providing Organisation for inclusion of students
- Log Sheet of work performed during On Job Training
- On Job Training completion certificate
- Feedback from On Job Training provider organization
- Feedback from student
- Certificate (from college)
- Content Page/Index
- Executive Summary
 - Brief overview of the on-the-job training project
 - Summary of key findings and outcomes
- Introduction
- Company Profile
- Job design and responsibilities handled
- Problems areas and Observations, strategies & solutions
- Outcomes and Key learning
- References

The OJT report should ideally range from 30 to 50 pages.

Chapter 1 Introduction:

- Project title
- Study area/problem
- Need for study/significance of the Job training
- Specific Learning Objectives on the Job Training
- Area in which he/ she has undergone on the Job training
- Details of Specific Concept learned by student on the Job training
- List of the skill that he/she is acquired during on Job training
- Limitations

Chapter 2 Company Profile:

- Company Overview
- History
- Visions and Mission
- Company hierarchy chart
- Overview and functions of different departments
- Product profile
- Department where on the Job training carried out

Chapter 3 Job design and responsibilities handled

- Details of Job design and Job Description.
- Details of specific skill required as per the company Policy
- Details of actual work done

Chapter 4 Problems areas and Observations, strategies & solutions

- Observations
- List of the skills required to perform the assigned task, not included in the syllabus
- Problems faced while performing the assigned Task
- How the problems were address to
- Contribution made towards better functioning the organization

Chapter 5 Outcomes and Key learning

- Utility of the job training program
- Suggestions for improvement in the syllabus
- Will the job training improve employability?
- Key learning from the Job training

Annexures:

- Undertaking from student about his/ her behavior to the organization

Formats required for On Job Training Programme

1. Letter to On Job Training Providing Organization for inclusion of students
2. Undertaking from student about his/ her behavior to the college
3. Undertaking from student about his/ her behavior to the organization
4. Log Sheet of work performed during On Job Training
5. On Job Training completion certificate
6. Feedback from On Job Training provider organization

LETTER TO ON JOB TRAINING PROVIDING ORGANISATION FOR INCLUSION OF STUDENTS

(College Letter Head)

To,

The Manager (HR),

----- Co Ltd.

Subject: - Request for inclusion of students of our college for On Job Training (OJT).

Madam / Sir,

Savitribai Phule Pune University has introduced 'On Job Training (OJT)' for Semester II of B. Sc. Animation students in its revised syllabus.

The purpose of the On Job Training is to provide hands-on training and experience to the students about various aspects of business and commercial activities. The On Job Training will also enhance employability of students.

In view of this, I request you to provide following students of our college (List enclosed) with An opportunity for On Job Training in your esteemed organisation.

We would appreciate if you could provide exposure of the following business activities to these students: - Mention here the key contents of the discipline specific special subject selected by the student We look forward to a mutually rewarding academic association with your organisation.

Thank you.

Sincerely,

Coordinator, On Job Training Programme

Principal

UNDERTAKING FROM STUDENT

1. Name of the Student :

2. Class :

3. Division and Roll Number :

4. Present Address :

5. Permanent Address :

To,

The Principal, ----- College, -----

Subject: Undertaking

Respected Madam / Sir,

I am studying in semester VI of B.Sc. Animation I am going to join -----

(Name of the organisation) for my One Hundred Twenty Hours On Job Training during -----to -----.

I assure that I will follow all the rules and instruction issued by the On Job Training providing organisation. I will be responsible for my behaviour and performance during the On Job Training period.

Thank you.

Yours obediently,

(Name & Signature of parent)

Date:

(Name & signature of the student)

UNDERTAKING FROM STUDENT

To,

The Manager (HR), ----- (Place)

Subject: Undertaking

Respected Madam / Sir,

I am a student of ----- College. I am studying in semester VI of B.Sc. Animation I am going to join your esteemed organisation for my One Hundred Twenty Hours On Job Training during -----to -----.

I assure that I will follow all the rules and instructions issued by you. I will be solely responsible for my behavior and performance during the On Job Training period.

I will not disclose any information that is made available to me to anyone during or after the On Job Training period.

I assure you that I will do my best and the On Job Training opportunity provided to me will be a mutually rewarding experience.

Thank you.

Yours sincerely,

(Name & signature of the student)

Date:

Place:

LOG SHEET OF WORK PERFORMED DURING ON JOB TRAINING

Letter Head of the On Job Training Provider Organisation

1. Name of the Student
2. Name of the College
3. Division and Roll Number
4. Address
5. Contact Number
6. Email ID
7. Special Subject
8. On Job Training start date
9. On Job Training end date

ON JOB TRAINING COMPLETION CERTIFICATE
Letter Head of the On Job Training Provider Organisation

To,

The Principal,

----- College, ----- (Place)

Subject: On Job Training Completion Certificate

Dear Madam/ Sir,

I am happy to inform you that following students of your college have successfully completed the 'One Hundred Twenty Hours On Job Training' in this organization.

Sr. No. Name of the student Roll No.

Subject:

- 1.
- 2.
- 3.
- 4.

These students have been provided with adequate exposure and necessary hands-on training Pertaining to their special subject. I am confident that these students will perform effectively in similar type of organisations.

I wish them every success in future endeavours.

Thank you.

Sincerely,

Name & Signature

(Authorised Signatory)

Stamp