

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL
(Formerly West Bengal University of Technology)
Syllabus of B.Sc. In VFX Film Making
(Effective from 2023-24 Academic Sessions)

Semester 3

Paper Name: Introduction to Motion Graphics

Paper Code: BVFM 301

Credit Points - 3

Total Contact Hours – 75

Course Objective: This course aims to introduce students to the fundamental principles of motion graphics and infographics within the industry landscape. By the course's conclusion, students will cultivate a practical understanding of current industry trends and best practices in motion graphics production. Through hands-on projects and theoretical instruction, students will learn the entire motion graphics creation process, from conceptualization to distribution. They will gain proficiency in using industry-standard software tools and techniques to design visually engaging and informative motion graphics and infographics.

SL No.	Course Outcome	Mapped modules
1	Remembering	M1, M2
2	Understanding the course	M1, M2, M3, M4
3	Applying the general problem	M3, M4
4	Analyze the problems	M3, M4
5	Evaluate the problems after analyzing	M3, M4
6	Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level (If applicable)	Remarks (If any)
M1	Foundation of Motion Graphics & Infographics	10	25	1	1		
M2	Introduction Corporate Motion Graphics & Advertisements	15	25	2	1		
M3	Introduction to Element 3D	10	25	3	1		
M4	Understanding Professional 3D Motion Graphics with Cinema 4D	10	25	4	1		
		45	100				

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Paper Name: Introduction to Motion Graphics

Paper Code: BVFM 301

Total Credit: 3

Total Hours of Lectures: 45 hours

SL No.	Topic/Module	Hours
1	<p>Module 1- Foundation of Motion Graphics & Infographics:</p> <ul style="list-style-type: none"> • The concept of Frame & Frame Per Second • Concept Development for Script of Motion Graphics • Introduction to Adobe After Effects • Introduction to Infographics • Concept of 2D and 3D Motion Graphics • Concept of Timeline and Space Management in After Effects • Different tools of After Effects 	15
2	<p>Module 2- Introduction Corporate Motion Graphics & Advertisements:</p> <ul style="list-style-type: none"> • Fundamentals of Corporate Motion Graphics • Digital Trends in the Media Market • Script Development for Advertisement • Digital Advertisement in Digital Platforms 	10
3	<p>Module 3- Introduction to Element 3D:</p> <ul style="list-style-type: none"> • Introduction to 3D Motion Graphics • Concept of 3D Objects • Text Animation • Importing OBJ • Implementation of Texturing • 3D Camera Projection 	10
4	<p>Module 4- Understanding Professional 3D Motion Graphics with Cinema 4D:</p> <p>The course gives strong foundation keys to a successful understanding of Cinema 4D. 3D Motion Graphics involves a number of complex and discrete stages including an initial story, idea, or commission, through screenwriting, element designing, sound recording and pre-production, editing, and screening the finished product before an audience that may result in a product advertisement of other corporate or film-based release and an exhibition.</p> <ul style="list-style-type: none"> • Concept of 3D Motion Graphics • Product Design • Television Commercial 	10

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Suggested Reading:

1. Design for Motion: Fundamentals and Techniques of Motion Design - Austin Shaw
2. Creating Motion Graphics with After Effects - Trish Meyer
3. After Effects Apprentice - Trish Meyer
4. Animated Storytelling: Simple Steps for Creating Animation and Motion Graphics - Liz Blazer
5. The Impact of Motion Graphics in Modern Branding and Marketing – Prof. Soumen Das
(Research Article)

Paper Name: Introduction to Motion Graphics

Paper Code: BVFM 391

Total credit: 2

Total Hours of Lectures: 30 hours

Course Objective: This course aims to introduce students to the fundamental principles of motion graphics and infographics within the industry landscape. By the course's conclusion, students will cultivate a practical understanding of current industry trends and best practices in motion graphics production. Through hands-on projects and theoretical instruction, students will learn the entire motion graphics creation process, from conceptualization to distribution. They will gain proficiency in using industry-standard software tools and techniques to design visually engaging and informative motion graphics and infographics.

SL No.	Course Outcome	Mapped modules
1	Remembering	M1, M2
2	Understanding the course	M1, M2, M3, M4
3	Applying the general problem	M3, M4
4	Analyze the problems	M3, M4
5	Evaluate the problems after analyzing	M3, M4
6	Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level (If applicable)	Remarks (If any)
M1	Foundation of Motion Graphics & Infographics	5	25	1	1		
M2	Introduction Corporate Motion	5	25	2	1		

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	Graphics & Advertisements						
M3	Introduction to Element 3D	10	25	3	1		
M4	Understanding Professional 3D Motion Graphics with Cinema 4D	10	25	4	1		
		30	100				

Paper Name: Introduction to Motion Graphics (P)

Paper Code: BVFM 391

SL No.	Topic/Module	Hours
1	Module 1- Foundation of Motion Graphics & Infographics: <ul style="list-style-type: none"> • Creating different types of logo animation and lower thirds for the different programs in television media. 	5
2	Module 2- Introduction Corporate Motion Graphics & Advertisements: <ul style="list-style-type: none"> • Creating different types of motion graphics-based advertisement for digital media. • Creating infographics for corporate works – data visualization, data analytics • Explainer Videos 	5
3	Module 3- Introduction to Element 3D: <ul style="list-style-type: none"> • Importing 3D Objects • Creating the Box Shadows • Setting Up Lights and Optical Flares • Adding Text and More Rigging • Alternative Animation Options • Copying Animation and Adding Scenes • Setting Up the Example Footage • Premiere Pro - Exporting the Color Graded Footage • Adding the Before and After Footage to After Effects • Setting up the Footage for Animation • Importing the Footage and Setting It Up • Creating the Transition Between the Live Footage Layers • Copying Instances of Animation • Elements 3D - Setting Up the Second Instance 	10

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	<ul style="list-style-type: none"> • Creating the 3D Subscribe Button • 3D Button - Extruding and Texturing the Elements 	
4	<p>Module 4- Understanding Professional 3D Motion Graphics with Cinema 4D:</p> <ul style="list-style-type: none"> • Concept of 3D Motion Design • Realistic Product Modelling in 3D using Cinema 4D Tools • Creation of Studio Lighting for Product Visualization • Enhancing the Visuals using Shading and Texturing • Creating Product based Texturing in Cinema 4D • Advanced options of the Random Effector • Noise Pattern with the Random Field • Sorting the Randomness • Synchronized and Indexed options on the Random Effector • Using the Random Field as a Deformer • Push Apart Effector • Using the Push Apart Effector to Populate a Landscape • Creating a Color Blindness Test with the Push Apart Effector • The Delay Effector • Delay Effector: Advanced Uses • The Delay Field • Randomizing the Delay Effector and Field 	10

Suggested Software:

1. Adobe After Effects
2. Element 3D (Plugin)
3. Cinema 4D

Suggested Reading:

1. Design for Motion: Fundamentals and Techniques of Motion Design - Austin Shaw
2. Creating Motion Graphics with After Effects - Trish Meyer
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Paper Code: BVFM 302

Credit Points - 3

Total Contact Hours – 75

Course Objective: This course aims to provide students with a comprehensive introduction to the visual effects (VFX) industry and its workflow. By the end of the course, students will have developed a foundational understanding of the significance of VFX in various media productions. They will gain insight into the diverse types of work within the VFX industry, including compositing, 3D modelling, animation, and more. Through theoretical instruction and practical exercises, students will acquire the skills necessary to navigate the VFX workflow effectively, from pre-production planning to post-production integration.

SL No.	Course Outcome	Mapped modules
1	Remembering	M1, M2
2	Understanding the course	M1, M2, M3, M4
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Module Number	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level (If applicable)	Remarks (If any)
M1	Fundamentals of Visual Effects	10	25	1	1		
M2	Introduction to Chroma Compositing in After Effects	15	25	2	1		
M3	VFX Workflow: Production Pipeline	10	25	3	1		
M4	Footage based Compositing & Colour Correction	10	25	4	1		
		45	100				

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Paper Code: BVFM 302

Total Credit: 3

Total Hours of Lectures: 45 hours

SL No.	Topic/Module	Hours
1	Module 1- Fundamentals of Visual Effects: <ul style="list-style-type: none"> • Concept of VFX Compositing • Detail overview of different Compositing Fields • Concept of CGI • Concept of Matting • Concept of Blue & Green Screen • Front & Rear Projection 	10
2	Module 2- Introduction to Chroma Compositing in After Effects: <ul style="list-style-type: none"> • Concept of Chroma Compositing • Difference between green screen and blue screen • Importance of Chroma in Digital Filmmaking • Integration of Chroma in studio-based work 	15
3	Module 3- VFX Workflow: Production Pipeline: <ul style="list-style-type: none"> • Fundamentals of Production Pipeline in VFX Industry • Coordination based work in Production • Different departments and units • Importance of production pipeline 	10
4	Module 4- Footage based Compositing & Colour Correction: <ul style="list-style-type: none"> • Integration of footages in compositing development • Developing basic motion implementation in compositing • Basics of Cinematic Color in compositing • Analogous color, Complimentary color, Monochromatic color in cinema 	10

Suggested Software:

1. Adobe After Effects

Suggested Reading:

1. Digital Compositing for Film and Video: Production Workflows and Techniques - Steve Wright
2. Visual Effects and Compositing - Jon Gress

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Syllabus of B.Sc. in VFX Film Making (NEP Based CBCS)

Effective from Academic Session 2023-2024

3. Audio Video Systems – Bali & Bali (Khanna Publishing House)
4. Compositing Visual Effects: Essentials for the Aspiring Artist - Steve Wright
5. Professional Digital Compositing: Essential Tools and Techniques - Lee Lanier
6. The Evolution Of Visual Effects In Cinema: A Journey From Practical Effects To CGI – Prof. Soumen Das (Research Article)

Paper Name: Introduction to Visual Effects (P)

Paper Code: BVFM 392

Total credit: 2

Total Hours of Lectures: 30 hours

Course Objective: This course aims to provide students with a comprehensive introduction to the visual effects (VFX) industry and its workflow. By the end of the course, students will have developed a foundational understanding of the significance of VFX in various media productions. They will gain insight into the diverse types of work within the VFX industry, including compositing, 3D modelling, animation, and more. Through theoretical instruction and practical exercises, students will acquire the skills necessary to navigate the VFX workflow effectively, from pre-production planning to post-production integration.

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4	Analyze the problems	M3, M4
5	Evaluate the problems after analyzing	M3, M4
6	Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Covered CO	Covered PO	Blooms Level (If applicable)	Remarks (If any)
M1	Fundamentals of Visual Effects	5	20	1	1		
M2	Introduction to Chroma Compositing in After Effects	5	20	2	1		
M3	VFX Workflow: Production Pipeline	10	30	3	1		

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M4	Footage based Compositing & Colour Correction	10	30	4	1		
		30	100				

Paper Name: Introduction to Visual Effects (P)

Paper Code: BVFM 392

SL No.	Topic/Module	Hours
1	Module 1- Fundamentals of Visual Effects: <ul style="list-style-type: none">• Concept of Compositing with reference to cinema of 21st Century and analyzing their cinema making process	5
2	Module 2- Introduction to Chroma Compositing in After Effects: <ul style="list-style-type: none">• Process of Chroma removing in Adobe After Effects• Noise removing from Chroma• Screen Replacement Process	5
3	Module 3- VFX Workflow: Production Pipeline: <ul style="list-style-type: none">• Working the process of Sky Replacement• Day to Night Conversion Process	10
4	Module 4- Footage based Compositing & Colour Correction: <ul style="list-style-type: none">• Integration of multiple footages in Compositing development• Color Correction Process in After Effects	10

Suggested Software:

1. Adobe After Effects

Suggested Reading:

1. Digital Compositing for Film and Video: Production Workflows and Techniques - Steve Wright
2. Visual Effects and Compositing - Jon Gress
3. Audio Video Systems – Bali & Bali (Khanna Publishing House)
4. Compositing Visual Effects: Essentials for the Aspiring Artist - Steve Wright
5. Professional Digital Compositing: Essential Tools and Techniques - Lee Lanier
6. The Evolution Of Visual Effects In Cinema: A Journey From Practical Effects To CGI – Prof. Soumen Das (Research Article)