



**CINEMA FACTORY**  
ACADEMY

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N-S-D-C  
National  
Skill Development  
Corporation



**UNREAL**  
ENGINE

# UNREAL ENGINE VIRTUAL PRODUCTION



Academic Partner  
2025

**1 YEAR DIPLOMA**



Stage Unreal is a Virtual production studio based in Chennai. It was founded by Ace VFX Supervisor Mr. Srinivas Mohan and renowned Indian Cinematographer Mr. Manoj Paramahamsa. With constant hardware, software upgradations and novative applications along with successful experimentations in the fast-evolving field of Virtual Productions, Stage Unreal has grown into a dedicated and passionate team of professionals. The ethos of Stage Unreal is rigorous research and relentless development. Stage Unreal works with film makers, film production houses, media and technology divisions to create new worlds and realms hitherto complicated and out of bounds. If it can be imagined, Stage Unreal will create that pixel.

## Founders of Stage Unreal



### **Srinivas Mohan** **VFX Supervisor**

4 Time National Award Winner (Magic Magic, Sivaji, Enthiran, Baahubali – The Beginning) and a true Pioneer in the field of VFX in India with over 25 years of experience. Currently India's top VFX supervisor and at the same time a terrific mentor who has

authored and designed Animation and VFX courses for M.G.R government film and television institute.

**Filmography :** RRR, 2.0, Baahubali, Raja Rani, Maattrraan, Eega, Nanban, Dam999, Ra One, Enthiran, Eeram, Shivaji, Krrish, Anniyan, and many more.



### **Manoj Paramahamsa** **Cinematographer**

Starting with a State Award for "Best Cinematography" for his debut film (Eeram), has been the architect behind multiple blockbusters across languages in South Indian film industry. Most sought after Cinematographer in India, for always being

ahead of the curve in terms of the cutting-edge tools and technology he has introduced through his work for close to 15 years now. Manoj Paramahamsa and Srinivas Mohan have been the bedrock and have contributed their vast experience and expertise in the research and development of Stage Unreal.

**Filmography :** Eeram, Vinnaithaandi Varuvaayaa, Nanban, Race Gurram Enai Noki Paayum Thota, Radhe Shyam, Beast, Leo, and many more.



## Expert Mentors



### Aravind Naga

#### VFX Supervisor | Head Of The Department

Aravind Naga is a highly accomplished professional with over a decade of experience as a VFX Supervisor and Post Production Supervisor. His visual effects work on acclaimed films such as Super Deluxe, Modern Love Chennai and Title Animations for Theri and Mersal has

earned him prestigious accolades, including the Best VFX award at the Osaka Tamil International Film Festival for the film "Super Deluxe."

**Filmography :** Super Deluxe, Demonte Colony, Modern Love Chennai, Theri, Mersal, Maara, Maragadha Naanayam, Thegidi, Kuthiraivaal ,Kalyana Samayal Saadham, Kallachirippu, Kaiyum Kalavum, and many more.



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### Shiv Shankar

#### VFX & Virtual Production Mentor

Shiv Shankar stands out as a talented Senior VFX & Unreal Engine artist, specializing in Virtual Production with abundance hands-on experience in the visual effects industry. His proficiency in ICVFX has resulted in impressive outcomes across a range of notable projects.

His contribution at Annapurna's ANR Virtual Production Studios played a key role in various creative projects and refined his technical skills.

Shiv's portfolio exemplifies his ability to deliver compelling and high-quality visual effects.

#### Filmography :

The Ghost, Yashoda, Thandel, Miss Shetty Mr. Polishetty, Eagle, and Naa Saami Ranga and more.

#### Virtual Production Projects :

Rado, Chennai's Amrita, Vara Mahalakshmi Silks, Robinhood, Eagle, Naa Saami Ranga, Miss Shetty, Bigg Boss Telugu



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## Expert Mentors



**Muniraj**  
**Creative Technologist**

With over 12 years of experience as a DIT and creative technologist, Muniraj has established himself as a key figure in the filmmaking industry. Known for his exceptional problem-solving skills and innovative approach, he excels in addressing on-the-spot issues during film production.

**Filmography :** Kaala, Marina, Super Deluxe, Mumbai Police, Vikram Vedha, Thaanaa Serndha Kootam and many more.

## Unreal Engine Community Meetup Held At Cinema Factory Academy



# UNREAL ENGINE | VIRTUAL PRODUCTION

## Prerequisites

To ensure that students are well-prepared for the Unreal Engine course and can fully benefit from the training, the following prerequisites are required:

### **Minimum Education Requirement:**

Students must have completed a minimum of class 10 or equivalent. This foundational education ensures that students have the necessary academic skills and discipline to engage with the course material effectively.

### **Basic Foundations of Visual Effects:**

Students should have a basic understanding of visual effects concepts, including compositing, rendering, animation, and simulation.

### **Software Basics:**

Basic knowledge of VFX software such as Adobe After Effects, Blender or Nuke.

### **Computer Literacy:**

Proficiency in using computers and navigating software interfaces.  
Basic understanding of file management, software installation, and system requirements.

### **Recommended Preparation:**

Cinema Factory Academy's - **The Foundations Of VFX | 3 Months**

# UNREAL ENGINE | VIRTUAL PRODUCTION

## Detailed Course Breakdown

This 1-year program balances equal amounts of practical and theoretical training, complemented by an internship to ensure comprehensive learning and real-world experience.

### Module 1

#### Unreal Fundamentals

- Introduction to UE
- Creating Project/Maps
- User Interface
- Tools and Menu options

#### Asset Import Pipeline

- Importing/Exporting asset
- Livelink
- Importing Textures
- Migrating Projects

#### Sequencer Fundamentals

- Cinematics
- Addings Tracks
- Working with Multiple tracks
- Creating Level & Master sequence

### Module 2

#### Materials Fundamentals

- Understanding materials
- Creating Material & Material Instances
- Material Inputs
- Understanding Functions & Variables

#### Lighting Fundamentals

- Lighting basics & its types
- Adjusting Lightmaps
- Light mobility
- Indirect lighting

#### Level Design

- Creating Level Map
- Importing asset to level
- Creating Landscape/Scene
- Adding lights/camera/animations

# UNREAL ENGINE | VIRTUAL PRODUCTION

## Detailed Course Breakdown

### Module 3

#### Previsualisation

Previsualisation provides a virtual space to explore new ideas and to propose technical solutions and make way to convey the vision to the entire crew members. Unreal engine realtime rigs provide the previs artists and filmmakers to work-out the process easily and saves time.

#### What you'll Learn :

- Shots Breakdown & Staging
- Photogrammetry
- Virtual Location scouting
- Integrating assets in Unreal engine
- Live Rigs and Animation
- Virtual Lighting
- Camera Blocking and Movement

### Module 4

#### Technical-visualisation

Technical visualization is an extension of Previsualization. Sometimes script demands complex shots that are practically difficult and it can be sorted out with the help of technical visualization. When technical information like measurement of crane, camera position, angle and shots relative to subjects, etc is provided by simulating virtual camera.

#### What you'll Learn :

- Understanding Physical camera rigs
- LIDAR
- Simulcam
- Lighting and Camera positioning.



# UNREAL ENGINE | VIRTUAL PRODUCTION

## Detailed Course Breakdown

### Module 5

#### Post-visualization

The concept behind the post-visualization is that numerous plate shots, CGI elements, and a virtual set were all put together and composited. Match moved and gave a clear translation of the ultimate output. With the finalised post-visualization, the desired studio will have the precision in scheduling the post-production visual effects and also the bidding process for final VFX becomes fixed and more accurate.

#### What you'll Learn :

- Compositing in Unreal engine
- FX
- Keying

### Module 6

#### Performance Capture

Performance capture typically involves simultaneous recording of an actor's voice, body movement, and facial expressions. The performer wears "Xsens" mocap suit to capture their body movement; a microphone to capture their voice, and tiny facial markers to capture their facial nuances, and then the mocap data will be transferred to CGI characters.

#### What you'll Learn :

- Understanding "Xsens" Mocap suit
- Mocap data Transfer to Rigs
- Animation clean-up

### Module 7

#### Metahumans

Metahumans by Unreal engine is an open source that allows us to create our own digital humans in photo-realistic and the customization of hairstyle, facial features, body proportion, etc.

#### What you'll Learn :

- User interface
- Metahuman Controls
- Character Preparation



# UNREAL ENGINE | VIRTUAL PRODUCTION

## Detailed Course Breakdown

### Module 8

#### **Blueprint Fundamentals**

Variables and types

Blueprint actors, components, pawn

Node types

Character movement/interaction

#### **Animations Fundamentals**

Metahuman Overview

Working with skeletons

Camera Animation/Light animation

Animation using Blueprint

#### **Niagara Fundamentals**

Niagara Overview and Key concepts

Emitter spawn / settings

Niagara script editor

Niagara UI editor

### Module 9

#### **Control Rig Fundamentals**

Introduction to control rig in UE

IK/FK Rigging and Switching

Adjusting in real time

#### **Hair and Fur Fundamentals**

Groom asset editor

Groom Binding

Hair physics/simulation

Xgen for Hair

#### **Rendering and Post-Processing**

Post Process Basics

LUT

Anti-Aliasing

Realtime Rendering

# UNREAL ENGINE | VIRTUAL PRODUCTION

## Detailed Course Breakdown

### Module 10

#### Real Time - Compositing

The traditional method of VFX composition is time-consuming and demands a team of VFX artists. But now, With the help of the green screen and Real-time software unreal engine, the creators are allowed to live key the footage in real-time and get composited with the photorealistic background environment without waiting until backgrounds are added in the post-production.

#### What you'll Learn :

- Ncam tracker
- Camera tracking/Calibration
- Green screen compositing

### Module 11

#### ICVFX

In-camera Vfx gives seamless integration between real actors & physical sets with photo realistic backdrops displayed on LED volume. It's also referred to as on-set virtual production. It's a cutting edge methodology for filming Real-Time visual effects during live action film shoot. ICVFX results in providing the closest representation to the final product, as early on as the creative process.

#### What you'll Learn :

- Understanding LED volume
- LED projection
- Real-time rendering
- Live-link and multi user editing



## International Trip | Bangkok



International VFX Studio Visit - Monk Studios, Bangkok



Unformat Studio, Bangkok



Nextgen VP Summit, Bangkok



Figment Studio, Bangkok



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