

Course Outline: Virtual Production (MA) - 1-Year Full-Time

The MA in Virtual Production is a one-year, full-time master's degree designed to develop creative, technical, and critical expertise in one of the most dynamic areas of contemporary screen production. Virtual Production (VP) brings together film craft, real-time rendering, games technology, and visual effects to transform the way stories are conceived, visualised, and captured.

This course provides a complete overview of VP as both a technical ecosystem and a creative discipline, from worldbuilding and on-set workflows to AI integration and hybrid real-time cinematography. Students will learn how digital and physical elements interact across pre-production, production, and post-production, and how to collaborate across departments including cinematography, production design, and visual effects.

Delivered through intensive workshops, supervised projects, and industry-led masterclasses, the MA emphasises experimentation, collaboration, and professional readiness. By the end of the year, students will have developed a deep understanding of the technologies and aesthetics underpinning real-time production, culminating in a short final film that demonstrates their creative and technical mastery.

The 'long-thin' Master's Portfolio runs throughout the year, allowing students to reflect on their development, document their process, and situate their work within wider research and industry contexts.

Term 1

Module 1: Fundamentals of Virtual Production

This foundation module introduces the broad spectrum of VP practice, from previsualisation and virtual scouting to hybrid green-screen and LED volume workflows. Students gain an understanding of how game engines, camera tracking, motion capture, and content creation tools interact to support storytelling. They will explore VP as a holistic production mindset rather than a single technology, developing familiarity with its terminology, studio environment, and creative potential. Through small collaborative exercises, students apply these ideas in practice, producing simple real-time sequences and reflecting on their outcomes.

Module 2: Virtual Art Department

This module focuses on the design and construction of virtual environments and assets. Students learn to model, texture, and optimise digital assets for use in a real-time engine, working collaboratively to create cinematic environments. Alongside core VAD skills, the module introduces virtual scouting as a pre-production planning

tool and 3D printing using generative AI as a bridge between digital and physical design. Students experiment with hybrid workflows that combine physical and virtual elements, understanding how design choices impact performance, scale, and storytelling.

Master's Portfolio (Term 1 component)

Students begin the year-long portfolio by documenting their learning and critical reflections on VP technologies, collaboration, and creative decision-making. They develop a personalised record of technical experiments, research influences, and professional goals that will evolve throughout the course.

Term 2

Module 3: On-Set Virtual Production & Cinematography

This module brings together the technical and creative aspects of on-set VP practice, combining LED volume operation, camera tracking, lighting, and real-time playback systems. Students learn how to plan, configure, and manage an on-set VP shoot to explore lighting integration, exposure, and colour management across physical and virtual spaces. Emphasis is placed on collaboration between DOP, VP Supervisor, and Art Department to achieve visually coherent, final-pixel imagery. Students design and shoot short VP sequences, including 'home-made VP', balancing creative intention with on-set problem solving and safety.

Module 4: Capture Technologies in Virtual Production

This module explores how physical performances, objects, and environments are captured, processed, and integrated into a virtual production pipeline. Students learn about the technologies and workflows that bridge the physical and digital worlds, including how AI accelerates or enhances capture and clean-up. This equips students with both the technical competence and creative insight to digitise humanoid motion, facial performances, props, and real-world environments for use within real-time pipelines. From inertial and optical motion capture to volumetric scanning and photogrammetry, students engage with industry-standard tools and methods that feed into game engine and LED volume workflows.

Master's Portfolio (Term 2 component)

Students continue to build their reflective and critical portfolio, documenting how their understanding of collaboration, workflow management, and creative decision-making is evolving through hands-on practice.

Term 3

Module 5: AI Integration in Virtual Production

This module more deeply explores artificial intelligence as a creative collaborator and directorial assistant in filmmaking. Students will engage with tools such as Runway, Sora, and ElevenLabs, and others, to support story ideation, scriptwriting, storyboarding, and visual creation, including AI-assisted lip-syncing and animation. The module emphasizes the integration of AI-driven workflows into the broader production pipeline, allowing students to experiment with generating characters, dialogue, environments, and sequences in real time.

Module 6: Virtual Production Final Project

The final synoptic module brings together all learning from previous terms in a single collaborative production – either self-originated, or in collaboration with a team from an existing film. Working in small teams, students plan and deliver a complete short VP project (typically 1–2 minutes), demonstrating end-to-end proficiency in real-time workflows. They must design, light, shoot, and composite a sequence that combines digital and physical elements, showcasing technical excellence and creative ambition. This project serves as the culmination of their portfolio and a professional showpiece for industry engagement.

Master's Portfolio (Term 3 component)

Students complete their year-long reflective portfolio, synthesising their research, experimentation, and practical outcomes. The final submission includes a written reflection and a curated presentation of creative and technical work demonstrating their development across the course.

Collaborative Workshops

In addition to the core modules, students participate in a series of short interdisciplinary workshops designed to mirror real-world production environments and encourage collaboration across NFTS departments:

1. Light in the Volume (with Cinematography)

Students collaborate with cinematographers to design and shoot a short lighting exercise on the LED wall, balancing physical and emissive light sources to achieve realistic integration. The focus is on communication and shared creative problem-solving between VP and camera teams.

2. From Model to World (with Production Design)

VP and Production Design students work together to scan and digitise physical models or props, transforming them into virtual environments. The exercise explores the relationship between design, scale, and spatial storytelling, and introduces hybrid physical–digital workflows.

3. Finishing the Shot (with VFX)

VP and VFX students collaborate to create a seamless hybrid sequence combining in-camera VP and post-production effects. The project teaches both groups how to share data, manage colour pipelines, and ensure creative consistency across real-time and post workflows.