Course Outline: VFX: Environment and Assets (MA) - 1-Year Full-Time

Course Overview

The *MA VFX: Environments and Assets* is a one-year specialist Master's degree designed for emerging artists who want to create the worlds, environments, and digital assets that underpin visual effects. It offers advanced, practice-based training in 3D modelling, procedural generation, texturing, and look development, equipping students to produce professional-standard assets and environments for film, television, and games.

The course is designed to help students master the art of building immersive environments and breathtaking visual effects through advanced, industry-focused training. Students will develop the creative and technical expertise needed to design and construct digital worlds, from detailed props and hero assets to cinematic environments.

Building on the NFTS's long-standing reputation for world-class screen arts education, the *MA VFX: Environments and Assets* offers a high-intensity, production-focused experience. Students learn through making - producing a sequence of increasingly ambitious projects that replicate professional workflows and standards. They are taught by current industry practitioners, with direct exposure to the software, pipelines, and collaborative practices used in major studios such as Framestore, ILM, Union, One of Us, Selected Works and Image Based Arts.

The course is structured around three terms, with each term developing deeper technical and creative expertise. In the first term, students learn the core tools and workflows for 3D asset creation. In the second, they expand into environmental design, procedural generation, and advanced look development. In the final term, they apply their accumulated skills in a collaborative, production-based capstone project, integrating digital and physical assets into a cinematic sequence. Throughout, students are supported by the Master's Portfolio, a 'long-thin' module that runs across all three terms, providing a framework for reflection, research, and critical engagement with their practice.

Graduates will emerge as asset and environment specialists, fluent in the tools of digital creation and capable of working confidently across visual effects, animation, and virtual production pipelines.

Course Structure

Term 1: Foundations of Digital Worldbuilding

Module 1 – Foundations of Digital Environments and Asset Creation

This introductory module establishes the technical, conceptual, and artistic foundations of digital environment and asset creation for visual effects. From the outset, the emphasis is on thinking in terms of worlds rather than shots: how assets, environments, scale, and spatial coherence are designed to support storytelling across multiple camera angles, lighting conditions, and production contexts.
You will explore the principles that underpin professional environment and asset pipelines, including modelling logic, spatial organisation, surface definition, and pipeline readiness. Working with industry-standard tools such as Maya, Houdini, Substance Painter and Unreal Engine, you will develop a foundational understanding of how digital assets are created, structured, and prepared for downstream use in lighting, compositing, and real-time environments.

Module 2 – Producing a Photoreal Asset

This module extends students' technical and aesthetic understanding by focusing on photo-realistic asset creation for film or high-end television. Students will move from the utilitarian precision of games assets to the surface richness, material complexity, and shading sophistication required for cinematic integration. Working with Houdini, Maya, and Substance Designer, students will explore procedural modelling and texturing, look development, and the subtleties of physically based rendering (PBR).

Through research and visual reference, students will learn how to analyse real materials, reproduce their behaviour under light, and achieve credible photorealism. The final output is a production-quality hero asset or prop that could be incorporated into a live-action or CG sequence.

Term 2: Building and Rendering Worlds

Module 3 – Designing Environments~

In this module, you will design and construct a large-scale, film-quality digital environment by combining AI-assisted concept development, procedural systems design, and real-world data integration**.** The emphasis moves beyond individual assets to the systemic construction of worlds: environments that are coherent at multiple scales, resilient under production demands, and capable of supporting complex cinematic use.

The module begins with AI-driven concept generation, where you will use tools such as ComfyUI to explore, iterate, and art-direct environment concepts. Rather than treating AI as a one-click solution, the focus is on controlled iteration, critical selection, and creative direction**,** ensuring that conceptual work aligns with narrative intent, spatial logic, and production feasibility.

Following concept approval, you will translate these designs into a procedural environment pipeline, primarily using Houdini. You will develop procedural tools and

node networks capable of generating landscapes, road systems, buildings, foliage, and environmental detail at scale. Emphasis is placed on authoring systems rather than static outcomes, enabling variation, iteration, and scalability in line with professional VFX and virtual production workflows.

Module 4 – Cinematic FX Systems and Simulation for VFX
In this module, you will undertake advanced work in FX and simulation, developing complex, physically informed effects that function as camera-ready assets within professional VFX pipelines. The emphasis is on understanding FX not as isolated spectacles, but as systems-driven, production-critical components that must behave consistently, render predictably, and integrate seamlessly with lighting, compositing, and environment workflows.

You will create a series of sophisticated simulations, which may include fire and smoke (Pyro), rigid body destruction (RBD), fluid and water simulations, and, where appropriate, stylised or magical FX. Working primarily in Houdini, you will explore the underlying physical principles, solver behaviour, and data flows that govern these effects, gaining control over scale, timing, interaction, and visual coherence.

The module foregrounds FX asset development, requiring you to think beyond single-use shots. You will design simulations that can function as reusable, adaptable FX assets, as well as bespoke, shot-specific effects where appropriate. Particular attention is paid to caching strategies, versioning, parameterisation, and optimisation, enabling simulations to be iterated, art-directed, and deployed across different lighting and rendering contexts.

Term 3: Integration and Collaboration

Module 5 – Integrated Worldbuilding: From Miniature to Screen
The final term brings together all technical, aesthetic, and collaborative elements of the course in a synoptic capstone project. Working alongside students from *VFX: Lighting and Compositing*, *Model Making*, *Composing*, and *Sound Design*, students will create a fully realised cinematic sequence that integrates physical miniatures, digital environments, and real-time rendering.

Model Making students will construct practical miniatures, which are scanned and captured on set. Students will process and enhance this data, model additional digital assets, and integrate them within Unreal Engine to build a cohesive, high-fidelity environment. Working with *Lighting and Compositing* students, students will align lighting and camera data to ensure consistency between physical and digital components.

The project culminates in a short cinematic piece combining all elements into a seamless, hybrid world. This collaborative production mirrors professional studio workflows and demonstrates students' ability to manage complexity, communicate across disciplines, and deliver work of industry quality.

Module 6 – The Master's Portfolio (long-thin module)
Running throughout all three terms, the Master's Portfolio supports students' intellectual and reflective development as creative practitioners. Through this module, students will articulate their evolving artistic identity, research emerging industry trends, and critically analyse the relationship between their creative decisions and professional ambitions.

Students will engage in seminars on critical reflection, professional practice, and research methods, developing skills in self-evaluation, contextual analysis, and professional presentation. Students' portfolios may include reflective notes, annotated project documentation, visual breakdowns, and critical commentary connecting their practice to broader debates in digital production – for example, the ethical use of AI, sustainability in digital pipelines, or evolving concepts of authorship in VFX.

The module encourages students to see themselves not just as a technician or artist but as a thinking practitioner – someone who understands how their creative work engages with the wider cultural, technological, and ethical landscape of contemporary screen industries.

Learning Experience
Across the year, students will experience a continuous cycle of research, practice, reflection, and collaboration. Each module builds on the one before, moving from foundational technique to complex, collaborative application. Teaching is delivered through practical workshops, masterclasses, supervised studio practice, and group critiques.

By the end of the course, they will have developed:

- A portfolio of industry-standard digital assets and environments.
- A deep understanding of procedural, real-time, and AI-assisted workflows.
- Experience of working in collaborative, multi-disciplinary productions.
- A critically informed perspective on their own practice and the VFX industry at large.

Graduates from this course will be prepared to enter the industry as Asset Artists, Environment Artists, or Look Development Specialists, or to continue into further research or hybrid creative roles that bridge physical and digital production.