ANIMATION & VFX

TRIMESTER 1 - Bachelor & Diploma units

ANIMATION FOUNDATIONS
→ Production 1: Animation

This unit will introduce students to the fundamental principles of 3D animation. It focuses on the strong foundations and principles of 3D Animation core skills to becoming a professional Animator. This subject will allow students to build solid skills and assets for their portfolio and continue into more advanced areas.

3D MODELLING FOUNDATIONS
→ Production 2: Visual effects

This unit aims to introduce students to working in a 3D Modelling. It will allow students to form a solid conceptual understanding of 3D practice from interface navigation, modelling concepts, and industry workflows. Students analyse existing prop and environment modelling techniques to develop a pipeline of tools and methods in their work.

INTRODUCTION TO INDUSTRY: VFX PIPELINE
→ Business & Industry

This unit breaks down each element of the VFX pipeline- from storyboarding, through conceptual stages, pre-visualisation to Production and final compositing. Pre-Production, Production and Post Production. Students study each phase and choose a specific step to analyse in the VFX production pipeline. This unit explores phases of the production pipeline and iterative creative loops in relation to an existing contemporary production.

CRITICAL THINKING FOR DESIGN
→ Theory

This subject introduces students to critical thinking and communication skills which empowers students to apply these skills to their studies. Critical thinking can involve making judgments and evaluations to distinguish fact from opinion, making informed opinions, assessing the validity of a theory, and application of theories to practical situations.

TRIMESTER 2 - Bachelor & Diploma units

PHYSICAL ANIMATION
→ Production 1: Animation

This unit moves students into aspects of physical animation with a focus on important concepts such as employment of convincing weight, timing and spacing into real-world animation scenarios. Through a series of physical shot briefs, students build on previous analysis to create a range of cycles and action pieces. Students investigate different rigs for usage in physical shots and employ techniques to cater for different attributes for each rig.

CHARACTER & ENVIRONMENT MODELLING
→ Production 2: Visual effects

In this unit, students establish the pros, cons, and limitations of various software to generate various character concepts from different scenarios. Students learn to analyse characters from media, break down the main elements, create low poly character work from concept, and to sculpt high-resolution creatures and characters using photographic reference.

PRODUCTION DESIGN / ART DIRECTION
→ Business & Industry

This unit introduces students to production design/art direction, the role of the production designer/art director, and creative methods used to design for animation and VFX projects. Students learn industry best practice techniques for developing concepts in an iterative manner. Emphasis is on research and inspiration, production of mood boards and drawing.

FILM ANIMATION: HISTORY & THEORY
→ Theory

The unit offers students the opportunity to encounter a wide range of historically significant animation. Students learn how to analyse the aesthetics, filmmaking styles, and techniques of various productions. Students will be able to articulate the manner in which animation has evolved throughout its history in terms of technology, aesthetics, and cultural contexts.

TRIMESTER 3 - Bachelor & Diploma units

VFX PRODUCTION
→ Production 1: Animation

In this unit, students are tasked with investigating and employing a chosen area of visual effects into their creative folio. By studying techniques, to producing simple yet effective VFX elements and to complement their existing creative work, students can broaden their understanding of the context of animation work in production by adding basic particle, smoke, or similar elements to explore other domains of 3D work.

GAME PRODUCTION 01
→ Production 2: Visual effects

This unit will introduce students to the use of game engines in production. Students move into publishing work in a useable and playable form. Through a basic analysis of how game engines function, students can modify existing workflows to cater to a chosen platform to enhance their creative work.

PORTFOLIO BUILDING
→ Business & Industry

This unit provides a framework for animators and VFX artists to consider how best to collate and compile a professional portfolio. Students begin compiling a portfolio and understand what constitutes meaningful evidence of their achievements, and how to structure a portfolio to best represent their professional development and showcase their creative offering.

GAME DESIGN HISTORY & THEORY
→ Theory

In this unit, students have the opportunity to investigate the beginnings of game production and its roots in culture. Through studying the origins of video games, students will be able to understand the context of their creative digital work which will better inform their practice. Students will play through games and explore the mechanics of gameplay during class sessions to better inform decision making around their game design.

TRIMESTER 4 - Bachelor only units

ACTING FOR ANIMATION 01 + LIGHTING 01

This unit introduces students to the foundations for acting in digital animation. Through a series of exercises, students can develop an understanding of the physical and psychological attributes of character and the ability to apply these factors in their animation work. Using high-end software, students also learn lighting and camera techniques to effectively compose dynamic and appealing visual effects shots.

DIGITAL SCULPTING & TEXTURING 01 + LIGHTING 01

This unit covers the knowledge and skills of more traditional sculpting techniques using digital media. Clay modelling software work allows students to examine traditional techniques of sculpture. In this unit, students explore the technical aspects of sculpting, and deconstructing techniques and workflows to best create their chosen concept. Using high-end software, students also learn lighting and camera techniques to effectively compose dynamic and appealing visual effects shots.

FX & SIMULATION 01 + LIGHTING 01

This unit delves into the world of creating foundational visual effects using sophisticated industry-standard software and techniques. Students begin exploring rigid body and volume-based smoke and fire simulations and the basics of physical factors affecting visual effects in a simulation environment. Using high-end software, students also learn lighting and camera techniques to effectively compose dynamic and appealing visual effects shots.

COMPOSITING 01 + LIGHTING 01

This unit offers students an opportunity to collate rendered images into real-world footage and visual effects. Starting with the underlying theory and vocabulary of the history of compositing, students analyse the techniques used to create visual effects shots for film and television. Using high-end software, students will learn lighting and camera techniques to effectively compose dynamic and appealing visual effects shots.

STORYBOARDING & CINEMATOGRAPHY

→ Theory

This unit introduces students to the use of storyboards in visual storytelling for animation and VFX projects. Students develop knowledge of drawing, staging, camera angles, framing, transitions, timing and editing. It includes an overview of cinematography and also discusses the creation and use of animatics.

PRODUCTION MANAGEMENT

→ Business & Industry

This unit introduces students to production management concepts and practices used in the animation and VFX industries. Production management requires students to consider how to balance the scope of a project with available resources and the time allocated for production. Students will explore and apply these ideas through the development of a pitch for an animation project of their own design.

TRIMESTER 5 - Bachelor only units

ACTING FOR ANIMATION 02 + GAME PRODUCTION 02

In Acting for Animation, students focus on convincing dialogue and facial animation, illustrating the physiological attributes and motives of a character through understated motion. Work will focus on constructing emotive origin for each motion. An emphasis is given to characterising the motivations of a given animation piece in written form, rough storyboarding, and filming reference footage.

In Game Production 02, students explore the usage of game engines for multi-step based workflow. Deploying their digital projects for use in a playable game, students can broaden their understanding of the workflow of publishing work in a sophisticated production engine, allowing their newly created work to function in an AAA game environment.

DIGITAL SCULPTING & TEXTURISING 02 + GAME PRODUCTION 02

This unit moves students into more complex areas of modelling, working with a strong exploration into creature anatomy. Underlying musculature and bone/organ analysis is important in the creation of work and students will explore the finer details: fur, wrinkles, veins, and various other animal characteristics.

In Game Production 02, students explore the usage of game engines for multi-step based workflow. Deploying their digital projects for use in a playable game, students can broaden their understanding of the workflow of publishing work in a sophisticated production engine, allowing their newly created work to function in an AAA game environment.

FX & SIMULATION + GAME PRODUCTION 02

In Fx & Simulation, students delve into complex simulation looking at elements like wind, fire, fluids and more environmental forces. Students develop rigid body simulations, combined with particle simulations to create completed and multi-faceted FX scenes. This layering of effects relies heavily on visual reference, where students must analyse real world footage to inform a believable FX shot.
In Game Production 02, students explore the usage of game engines for multi-step based workflow. Deploying their digital projects for use in a playable game, students can broaden their understanding of the workflow of publishing work in a sophisticated production engine, allowing their newly created work to function in an AAA game environment.

COMPOSITING 02 + LIGHTING 02

In Compositing 02, students work with live action footage, to apply various 2D and 3D effects, while examining the principles to execute a live action project. Students will analyse the best methods to create convincing implementation of 3D and 2D renders into the real world and rendered footage.

Lighting 02 sees students render 3D elements into real world footage through advanced materials and surfacing techniques, and further cinematography/shot composition. Students finesse their lighting knowledge and skills while adding to their creative portfolio.

TRIMESTER 5 (continued) - Bachelor only units

SCREENWRITING
→ Theory

The unit offers students an overview of concept creation and how to generate stories. Students examine elements that constitute effective storytelling. Through the development and pitching of an original concept, students gain insights into how the role of writer as story artist contributes to the development of scenarios. Students examine how an audience's engagement is impacted by the writer's creative choices such as point of view and genre.

CREATIVE TEAM MANAGEMENT
→ Business & Industry

This unit introduces students to the characteristics of creative work, the nature of creative people and the implications of this on organisations who employ creative teams. Also discussed are the nature of creativity, psychology, personalities, change, motivation, conflict management, team dynamics, leadership, discrimination, culture and ethics.

TRIMESTER 6 - Bachelor only units

CREATURE ANIMATION
→ 3D Animation

In this unit, students learn more complex animation techniques involved in quadruped and winged characters. Distinguishing the required animal physiology, students explore various media – footage, simulations, and animal anatomy to justify the requirements of convincing creature animation. Students assess and select a suitable animation rig, before then researching appropriate reference to create professional creature performances.

DIGITAL SCULPTING & TEXTURING 03
→ 3D Modeling

In this unit, students explore the dimensions of sculpting such as hard surface sculptural work, and various exploratory projects to enhance development of a cohesive style of modelling. Various exercises and projects on obscure tools and workflows, as well as the time to compose a portfolio of professional pieces, consolidate the students' advanced technical knowledge and skills.

FX & SIMULATION 03
→ FX Simulation

In this unit, students' consolidate their technical knowledge and skills in FX. Students choose a topic, analyse references to justify creative decisions, and create a final FX shot. Larger scale shots are discussed in this unit, including oceanscape and large-scale fire simulations. Students explore advanced lighting techniques and camera compositions to best communicate their concept to the viewer. There is a strong emphasis on rendering and lighting.

COMPOSITING 03
→ Lighting & Compositing

In this unit, students explore the range of lighting and cinematography theory used to consolidate their compositing techniques. Students create their own personal short film using the gathered methods, techniques and tools taught in previous units. Using shot or sourced footage, and applying written concepts to their effects work, students gain valuable skills through real-world and longer projects.

PORTFOLIO & PRESENTATION
→ 3D Animation, 3D Modeling, FX Simulation, Lighting & Compositing

In this unit, students build on the skills and knowledge gained from Freelance Business Careers Development as they develop a creative and unique approach to portfolio development. Students create a number of highly curated presentation options to be reviewed by peers, academics and industry professionals to offer critique and discussion before creating a final animation and visual effects portfolio of industry standard.

CREATIVE PROJECT
→ Theory

In this unit, students produce their final capstone project and are given the opportunity to develop their ideas into film while exploring the collaborative environment of short film production. Students explore topics such as teamwork, consensus decision-making, collaborative idea development, and film production management as they work through the production of their short film.

FREELANCE BUSINESS + CAREERS DEVELOPMENT
→ Business & Industry

In this unit students have the opportunity to develop working as a professional based on current and emerging industry practices. A range of networking opportunities will be offered, implemented and evaluated to refine career directions. Preparation of personal knowledge and skills for career development will be a main focus of this unit and students will be able to work both individually and in teams.