COURSE CONTENT

Course Code	DT2018
Course Title	Animation for Games I
Pre-requisites	Nil
No of AUs	3
Contact Hours	39 hours studio contact

Course Aims

In this intermediate course you will explore animation and motion blending using a real-time digital game environment. You will engage with and experiment with a range of digital methods such as key-framed animation, motion capture blending, real-time rendering, game-based interaction, digital world building, and alternative forms of digital narrative. The learning in this course will position you for future learning and independent projects based around real-time digital game environments.

Intended Learning Outcomes (ILO)

By the end of the course, you should be able to:

1. Describe contemporary animation and motion-based processes appropriate for real-time digital game rendering.
2. Develop original animations and motion blends for real-time digital game rendering.
3. Create a real-time digital environment that utilises animation and motion blends in a semi-interactive narrative format.
4. Critique and develop original solutions to technical challenges presented by the real-time digital medium.
5. Contribute constructively in class critiques and activities to discuss and solve challenges in animation, node-based coding and rendering.

Course Content

The real-time digital game environment.
You will begin this course with an introduction and overview of the real-time digital game environment. You will explore how this medium can incorporate traditional digital key framing techniques, as well as motion capture, and combine these sources into a game-engine digital space with real-time rendering.

Keyframing and motion capture
You will become familiar with the workflow from 3D modelling and animation imported into a game engine. Once in the game engine environment, a range of features and possibilities, unique to that space, will be explored. You will also explore several techniques of using motion capture sources, whether this be into your 3D animation, or directly into the game engine. Various methods to blend these motions to create convincing sequences will be examined, as will the possibilities of creating new blended motions.

Interaction
You will have the option of also taking advantage of a limited range of interaction possibilities

offered by a game engine. This may be in response to your pre-animated actions, or in response to a first-person player, who moves through your digital space, as in a “walking simulator”. This introduction to game-play interaction opens up possibilities that can be further extended in subsequent game-oriented courses.

Game world
Principles and processes of building a basic digital game world will be covered in this course. Concepts such as maps, levels, objects, textures, and lighting and rendering demands will be examined, particularly in light of real-time rendering requirements. You will gain an appreciation of the difference between high-end cinematic rendering from a 3D program compared to the graphics-processing rendering capabilities of a game engine. You will also apply style considerations from previously learning, to create a stylistically consistent environment within which you will place a motion-based narrative.

Final format
In all cases the final assessible format will be a rendered video file. This may be of an animated narrative, or a play-through video of a first-person walk-through. You will also have the option of rendering to a playable executable file.

Class structure
The first 6 weeks of the course focuses on learning new techniques and processes, how these are applied, and free exploration and experimentation.
The second half of the course focuses on applying the learning to a project that demonstrates high proficiency with advanced digital processes and the application to a meaningful narrative.