

COURSE CONTENT

Course Code	DT3009
Course Title	Cinematic Concepts and Motion Capture Applications
Pre-requisites	NIL
No of AUs	3
Contact Hours	39 hours studio contact

Course Aims

This elective course will introduce you to creative concepts and production strategies for cinematic experiences using motion capture technology and real-time animation film making. You will have the opportunity to apply these virtual production techniques to your own original creative project. The strategies and approaches developed in this course can be applied to projects in a variety of other media-based courses.

Intended Learning Outcomes (ILO)

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

1. Identify and discuss techniques used in motion capture real-time animation film making.
2. Demonstrate fundamental techniques required to create real-time motion captured animated films.
3. Apply motion capture and other virtual production techniques with originality to create artistic cinematic experiences.
4. Present and evaluate the effectiveness of motion capture and selected virtual production processes.
5. Critique virtual production ideas and techniques employed by peers in a constructive manner

Course Content

The role of Real-Time Animation

Real-Time Animation, also called “Real-Time Performance Capture,” is the process of using motion capture system to animate 3D characters in real-time. Apart from creating real-time animated films, this technique is also used for pre-visualisation of cinematic sequences, creating animation assets for gaming, augmented and virtual reality. This course will introduce you to the basic concepts of motion capture, virtual cinematography, real-time rendering, virtual production and will deliver a practice-based introduction to the fundamental techniques and processes involved.

Motion Capture fundamentals

Through practice-based exercises and project assignments, you will learn essential and advanced techniques for successful motion capture using industry standard hardware and software tools.

Virtual Cinematography

Using virtual camera, you will learn the basic techniques of cinematography in real-time animation filmmaking and virtual production. Through theory and practice, you will be able to familiarise with virtual cinematography in a narrative context.

Real-time rendering

You will learn the fundamentals of real-time rendering engines and their role in virtual

productions. Through practice-based assignments, you will learn how to prepare scenes and characters to be efficiently rendered in real-time renderers.

Cinematic narration

You will explore storytelling and narrative considerations for real-time animation and virtual production that is derived from traditional formats as well as contemporary virtual production techniques.

Class assignments

Creative projects, which explore concept-development, motion capture, character re-targeting, real-time rendering, and post-process techniques, as well as story-formats for virtual production. Developed through lectures, tutorials, class exercises, and peer/instructor feedback sessions.