2024 / 25

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South East Technological University

Module Descriptor

3D Animation and Transmedia (Computing and Mathematics)

3D Animation and Transmedia (A13944)

Short Title: 3D Animation & Transmedia
Department: Computing and Mathematics
Credits: 5 **Level:** Advanced

Description of Module / Aims

This module provides the foundation for advanced animation construction and integration with external media, as well as techniques to automate and optimize development processes. Students will learn advanced rigging and animation techniques such as Facial Animation, Visual Effects and Motion Capture. In addition, students will be introduced to productivity, management and optimization techniques using asset management services, scripting and expressions.

Programmes

		stage/semester/status
COMP-0634	BSc (Hons) in Creative Computing (WD_KCRCO_B)	4 / 8 / E
COMP-0634	BSc (Hons) in Multimedia Applications Development (WD_KMULM_B)	4 / 2 / E

Indicative Content

- Structured programming to address 3D modelling, animation and customization practice
- Animation techniques for Motion Capture, Facial Animation and Lip Synching
- 3D animation production asset management
- Visual effects (VFX) - incorporate physics elements into animation production
- Integration of 3D Animated assets across multiple media sectors: TV, Gaming, Engineering and Corporate

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Appraise key facial rigging techniques.
2. Evaluate and apply motion capture techniques for CGI use.
3. Assess the practical principles of VFX integration with animated CGI scenes.
4. Evaluate the principles and practice of automated modelling, animation and customized techniques using scripting and computational expressions.
5. Critique the principles of asset, environment and timeline management for 3d animation transmedia projects.

Learning and Teaching Methods

- Lectures.
- Practicals.
- Independent learning.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	12	
Practical	36	
Independent Learning	87	

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Portfolio	100%	1,2,3,4,5

Assessment Criteria

<40%: Unable to interpret and implement fundamental concepts and practices for advanced animation and customized tool development.

40%–49%: Be able to interpret and implement fundamental concepts and practices for advanced animation and customized tool development.

50%–59%: Ability to interpret and implement concepts and pipeline services that integrate relevant 3D Assets across a range of transmedia platforms.

60%–69%: Be able to analyse, manage and design solutions to a high standard for a range of both complex and unforeseen problems through the use and modification of appropriate asset management skills and tools.

70%–100%: All the above to an excellent level.

Essential Material(s)

- Gould, D. *Complete Maya Programming: An Extensive Guide to MEL and C++ API*. 1st ed.. US: Morgan Kaufmann, 2003.

Requested Resources

- Computer Lab: Multimedia Lab