2024 / 25

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Ollscoil Teicneolaíochta an Oirdheiscirt

South East Technological University

Module Descriptor

3D Animation Practice (Computing and Mathematics)

3D Animation Practice (A13941)

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

Description of Module / Aims

The purpose of this module is to give a student the practical knowledge to prepare 3D Model and audio digital assets for use in rendered 3D animated scenes and to be able to appreciate the theory and practice of 3D animation techniques.

Programmes

		stage/semester/status
COMP-0965	BSc (Hons) in Creative Computing (WD_KCRCO_B)	3 / 6 / M
COMP-0965	BSc in Multimedia Applications Development (WD_KMULA_D)	3 / 6 / M

Indicative Content

- Rigging and Skinning 3D assets
- Real-time polygon mesh textured rendering
- Inverse Kinematics and motion analysis
- Principles of Animation
- Audio: adding soundtracks to scenes

Learning Outcomes

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

1. Design, manage and produce short key-framed 3D Animations.
2. Apply the key principles of animation to 3D assets and scene.
3. Prepare a computer generated character for animation.
4. Integrate audio assets within a 3D animated scene.
5. Demonstrate the rendering process needed to create a sequence of images.

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	70%	
Portfolio	70%	1,2,3
Final Project	30%	1,2,3,4,5

Assessment Criteria

<40%: Unable to interpret and apply the key concepts of Character Rigging and Lassiter's 3D Animation Principles.

40%–49%: Be able to interpret and apply the key concepts of Character Rigging and Lassiter's 3D Animation Principles.

50%–59%: Ability to discuss key concepts of the rigging and animation principles and ability to integrate related knowledge into the animation pipeline.

60%–69%: Be able to solve problems within the targeted animation pipeline field by experimenting with the appropriate skills and tools.

70%–100%: All the above to an excellent level. Be able to analyse and design solutions to a high standard for a range of both complex and unforeseen problems through the use and modification of appropriate skills and tools.

Essential Material(s)

- Naas, P. *Autodesk Maya 2014 Essentials*. UK: Wiley, 2014.

Requested Resources

- Computer Lab: Multimedia Lab