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MODULE DESCRIPTOR

Module Title

3D Character Animation

Reference	CM3129	Version	2
Created	December 2020	SCQF Level	SCQF 9
Approved	May 2019	SCQF Points	15
Amended	March 2021	ECTS Points	7.5

Aims of Module

To provide the student with the fundamental principles of animation and to develop and implement these principles into 3D character animation.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Demonstrate research and visual development skills in the context of an animation concept.
2	Select and implement a range of key 3D modelling techniques that can be used for character modelling.
3	Demonstrate a range of fundamental 3D animation techniques.
4	Critically evaluate and report on the development of an animated concept, showcasing a professional approach to organisation.

Indicative Module Content

Preparation: Pre-production, concept development, scriptwriting, storyboarding & general workflow. 3D Modelling: Topology for animation, organic modelling, edge loops & geometry flow, poly counts, low poly vs. high poly, UV unwrap & texturing. Animation techniques: Rigging systems, skinning, key-frame, pose to pose, inverse kinematics, forward kinematics, motion capture. 3D modelling & animation tools: Use of 3D modelling software & motion capture suite, post-production export & rendering.

Module Delivery

Key concepts are introduced and illustrated through lectures and directed reading. In the laboratories the students will progress through a sequence of exercises to develop sufficient knowledge of 3D animation & animation techniques to enable them to complete the practical design & implementation.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	48	N/A
Non-Contact Hours	102	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	This coursework involves the design, development & implementation of a 3D animation concept, and is worth 100% of the module grade.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The calculation of the overall grade for this module is based on 100% weighing of C1. An overall minimum grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	The student needs to achieve an A in C1.
B	The student needs to achieve a B in C1.
C	The student needs to achieve a C in C1.
D	The student needs to achieve a D in C1.
E	The student needs to achieve an E in C1.
F	The student needs to achieve an F in C1.
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1. WILLIAMS, R., 2009. The Animator's Survival Kit. Expanded Edition.
2. Villar, O., 2017. Learning Blender. 2nd ed. Addison-Wesley; 2nd edition (12 April 2017).
3. Blain, J., 2019. The Complete Guide To Blender Graphics: Computer Modeling & Animation, Fifth Edition. 5th ed. A K Peters/CRC Press; 5th edition (11 April 2019).
4. Baechler, O. and Greer, X., 2020. Blender 3D By Example - Second Edition. 2nd ed. [S.l.]: Packt Publishing.