Course title:	**3D GRAPHICS AND ANIMATION**	
Course code:	AAVC342	
Type of course:	Art Elective	
Level of course:	Bachelor	
Year of study:		
Semester when the course is delivered:		
Prerequisites:	AAVC202	
Number of ECTS:	6	
Hours:	3	
Name of lecturer(s):		
Learning outcomes of the course:	Upon completion of the course, students should be able:	Programme L.O
	1. to develop an understanding of the principles that govern the area of 3D graphics and animation;	1, 2, 4
	2. to develop an understanding on how 3D visuals can be represented in 2D formats as well as how these visuals can be transformed and rendered into 'realistic' images and video.	1, 2, 4, 8
Course Content:	**3D Modelling:** Coordinate Systems and Navigation. Lines, Polylines and Polygons. 2D Spines. Constructing 3D Objects. Transformations and Deformations. **Advanced Modelling:** Mesh Editing (Vertex, Edge, Face, Polygon and Element Operations). **Overview of Texture and Texture Mapping:** Light and colour. Surface attributes, Map channels. **Principles of Lighting:** 3D Lighting Basics. Lighting Effects and Strategies. **Camera:** Camera movement 3D Animation: Basics of animation. Frame Rates and Keyframes. Overview of Character Animation and Visual Effects. **Rendering.**	
Recommended and/or required reading:	- Kerlow, I. (2009) *The Art of 3D Computer Animation and Effects*, Wiley. - Cusson, R. (2009) *Learning Autodesk 3ds Max Design 2010: Essentials: The Official Autodesk 3ds Max Training Guide*, Focal Press. - Akenine-Moller, T., Haines, E. and Hoffman, N. (2008) *Real-Time Rendering*, A K Peters/CRC Press.	
Planned learning activities and teaching methods:	• **Computer lab and workshop based sessions** Studio based workshops ensure the relevant and successful progression of practical studies. The course also enables access to facilities with technical support. Each workshop is accompanied by video tutorials available on the e-learning database as well as material for experimentation. • **Visual Presentations** Sessions include illustrated demonstrations to instigate discussions and analyse methods and techniques within the design process in order of providing creative solutions to design projects. • **Integrated Project Work** The workshops are linked with the requirements of projects in conjunction with other	

	courses through group sessions and individual guidance. Using project briefs, emphasis is given to the active involvement of the student in the learning process, and a wider understanding of how assessment relates to the learning requirements is established.
Assessment techniques and Assessments criteria:	• Mini Projects - 35% • Final Project - 35% • Final Assessments - 30% Students will be graded on the aesthetic quality and technical skill they show in their work. Each project has specific requirements and will be graded based on the following criteria: Knowledge and understanding - 20% Research and Analytical Skills - 20% Production competency and solution - 50% Presentation and Communication - 10%
Language of instruction:	English
Work placement(s):	None