AMITY GLOBAL INSTITUTE

MODULE SYLLABUS

Course	Bachelor of Science Honours in Computer Science (University of London)
Module Title	3D Graphics and Animation
Module Syllabus No. (if any)	CM3045
Syllabus / Content / Learning Outcomes	This module will cover advanced methods used in current state-of-the-art graphics and animation systems. It will include the mathematical foundations, computational techniques and their use in creative practice. By taking this module, you will learn how to write programs that generate animated 3D graphics. There are several distinct study areas: 3D modelling and animation, the graphics pipeline, simulation of physics and shader programming. You will study a range of examples, and through these learn how you can program computer graphics in contemporary graphical software for different applications.
No. of Teaching Hours	Contact Hours – Lectures, Seminars & online activity (22 x 3) = 66 Independent Preparation, pre-reading and analysis = 84 TOTAL = 150
Teaching Methods	Lectures, tutorials, case-studies analysis, research journals and group discussion.
Assessment Methods and Weightages	One two hour unseen written examination and coursework Coursework 50% and Written examination 50% At least 35% in each element of summative assessment and a combined weighted average of at least 40%, subject to the application of rules for compensation.
Skills for Maximising Learning Outcomes	Reading and research
Dates of Examinations, Major Assessments and Assignments	Please refer to www.london.ac.uk exam tables If your effective date of registration is: • 1 October, you will take your first examination(s) in March of the following year, • 1 April, you will take your first examination(s) in September of the same year.
Topics covered	• Overview of 3D Graphics and mathematics for graphics • 3D Models and Transforms • Physics simulation • Keyframe Animation • Character Animation • Rendering and the Graphics Pipeline • Lighting, Materials and Texturing • Shader Programming • Vertex Shaders • Fragment Shaders