AMERICAN UNIVERSITY
OF CYPRUS

Course Code	Course Name	ECTS Credit
MG241	Principles of 3D environments	7.5

Pre-Requisite	Course Type	Language of Instruction
	Major Elective	English

Year of Study	Level of Course	Mode of Delivery
2nd / 2nd	BSc/1st Cycle	On Campus

Course Objectives:

The objective of the course is to introduce to students the principles of three-dimensional computer graphics in order to understand the requirements and constraints they aet in the design of virtual worlds and to be able to apply these principles in the creation of interactive 3D environments.

Learning Outcomes:

Upon completion of the course, students must be able to:

- Choose and apply techniques to create interactive environments
- Understand the basic principles used to describe objects and relationships in a virtual space
- Understand the requirements of using different environments in operating camera and projection windows in virtual worlds

They extend simple behaviors, such as drifting motion or the rolling speed of the wheels in relation to the movement of a virtual car in such a way that movement within virtual environments is realistic

Teaching Methodology:

Lectures 42 hours

Labs 30 hours

Course Content

Introduction to computer modeling and the concepts required for creating and managing them.

Using texture and illumination files for virtual objects. Motion via using indexes and data management

The differences between modeling packages and game design packages

Using game design packages, importing 3D files, hierarchies management and converting them to normal behaviors

Creating camera management systems in interactive environments that meet the expectations of cinema projections

Scripting programming for game design packages

Assessment Methods:

Final Exam

Mid-term/Lab Exams

Assignments

Required Textbooks/Reading:

Title	Author(s)	Publisher	Year
Introducing Autodesk Maya	Derakhshani D	Sybex	2015
Trigger Happy: The Inner Life of Video Games	Poole S.	Arcade Publishing	2004