

IT Design and Development for Video Games 1

9 ECTS

Game Programming

Year 1, Semester 2

Description

This module is intended for students in the Game Programming specialisation.

This module enables students to:

- Explore major issues in video game programming: image synthesis, solid geometry, physics and network.
- Grasp these key concepts by directly manipulating the C++ code of a simple engine that is completely unknown to them and manipulating the advanced tools of a market engine.

Detailed objectives

- Understand the basics of a simple game engine code written in C++.
- Change this basic code to develop a particular universe and gameplay.
- Know the basic principles of image synthesis for video games.
- Know how to write simple shaders and create effects linked to the manipulation of vertexes and fragments, in forward and deferred.
- Write the physical behaviour of a solid which is controlled by a controller and manage its collisions in a simple case.
- Understand the principles of architecture and service quality of synchronous networks and the special features to use specific to their game.
- Manipulate a standard market game engine and explore its advanced tools.

Assessment methods

Session 1

| Assessment method | Percentage of overall mark |
|--|-----------------------------------|
| Multiple-choice questionnaires in lessons and submission of projects | 60% |
| Exam in the form of Multiple-choice questionnaire & exercises | 40% |

Session 2

- Improve the projects and summary bibliographical report on concepts that the student has yet fully assimilated