Game Development

Academic Year: (2021 / 2022)   **Review date: 04/06/2021 14:15:01**

Department assigned to the subject:

Coordinating teacher: ZARRAONANDIA AYO, TELMO AGUSTIN

Type: Electives ECTS Credits : 3.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

- Programming (Course: 1 / Semester: 1)

OBJECTIVES

R1. Knowledge and comprenhesion. Basic knowledge about the scientific and technologic basis of Computer Science Engineering. Specific knowledge about Computation Science, Computers Engineering and Information Systems.

R2. Engineering Analysis. To be able to identify problems of Computer Science Engineering, identify their issues, identtify and select the most adequate method to solve them considering social, human health, environmental and comercial limitations.

R3. Engineering Design. To be able to carry out engineering design accoring to the level of knowldege and comprenhension, satisfying the requirements of the problem and collaborating with other engineers. The design cover devices, processes, methods and other non-technical requirements as social, health, security, environmental and comercial considerations.

R4 Research and Innovation. To be able to use the appropiate methods to conduct a research and carry out innovations in the area of informatics engineering

R5. Engineering Applications. To be able to apply the knowledge and comprenhension require to solve problems, supervise research procesess and design devices and process in the context of the Computer Science area according with cost, quality, security, efficiency, enviromental and ethics criteria. These capacities include the knowlegde, use and understanding of limitations of informatic systems, procesess engingeering, computer architectures, computational models, teams, technique bibliographic references and other sources of information.

DESCRIPTION OF CONTENTS: PROGRAMME

- Introduction to game design and development
- Architecture and main elements of a videogame
- Videogame programming fundamentals: game objects, behaviours, physics, UI y particle systems.
- Development frameworks and game engines

LEARNING ACTIVITIES AND METHODOLOGY

* Theoretical lectures: 0,5 ECTS. To achieve the specific cognitive competences of the course. Besides, to develop transversal competeces as capacity to analysis and abstraction.
* Practical lectures: 0,5 ECTS. To develop the specific instrumental competences. Besides, to develop transversal competeces as problem solving and knowledge application.
* Continous assessment exercises: 0,5 ECTS. Iniciated during the practical sessions and finished out of them. Their objective is to complete the development of the specific instrumental competences and to iniciate the developemnt of the actitudinals specific competences as well as the transveral competeces on problem solving and knowledge application.
* Practice: 1 ECTS. Carried out withouth the presence of the teacher. Their objective is to complete and

integrate the development of the specific competences and transversal competences by means of practice cases in which the problem, solving method, criteria for selecting the solving method, the results and their interpretation are well documented.
* Tutorships: Teacher assistance
* Exercises and examination: 0,5 ECTS. To complete the development of specific cognitive and procedimental capacities

ASSESSMENT SYSTEM

% end-of-term-examination/test: 30

% of continuous assessment (assigments, laboratory, practicals…): 70

The evaluation system includes the assessment of guided academic activities and practical cases, with the following weights:
Practical case: 70%
Examination: 30%

BASIC BIBLIOGRAPHY

- HOCKING, Joseph Unity in action: Multiplatform game development in C# , Manning Publ., 2015

- Salen, K., Tekinba¿, K. S., & Zimmerman, E. Rules of play: Game design fundamentals, MIT Press, 2004