

BASIC DETAILS:

Subject:	VIDEOJUEGOS Y SIMULACIÓN PARA INVESTIGACIÓN Y EDUCACIÓN		
Id.:	31382		
Programme:	GRADUADO EN DISEÑO Y DESARROLLO DE VIDEOJUEGOS. 2013 (BOE 28/03/2014)		
Module:	PROGRAMACIÓN DE VIDEOJUEGOS		
Subject type:	OBLIGATORIA		
Year:	4	Teaching period:	Primer Cuatrimestre
Credits:	6	Total hours:	150
Classroom activities:	67	Individual study:	83
Main teaching language:	Inglés	Secondary teaching language:	Castellano
Lecturer:	BLASCO LATORRE, DANIEL (T)	Email:	dblasco@usj.es

PRESENTATION:

The subject focuses on the use of serious games and simulation as tools for education, research, training or therapy.

The themes covered by the programme include the study of design theories, learning outcome evaluation and examples of experimental/ commercial applications integrating video game language elements, pedagogy and simulation beyond pure entertainment.

PROFESSIONAL COMPETENCES ACQUIRED IN THE SUBJECT:

General programme competences	G04	Ability to critically think about information, data and lines of action and their implementation in relevant social, scientific ethical issues.
Specific programme competences	E31	Ability to perform the evaluation of video games from their different approaches.
	E34	Ability to create and analyse games on their fundamentals and develop the understanding of what are the keys that determine how they work and their development.
Learning outcomes	R01	Know about representative serious games in the fields of education and research.
	R02	Describe the main characteristics of a serious game.

PRE-REQUISITES:

Students are expected to have solid object oriented programming knowledge, experience with languages like C++ or C# and previous working experience on real time applications using video game language/ mechanics. Experience with commercial game development engines is recommended too.

SUBJECT PROGRAMME:

Subject contents:

1 - General Introduction
1.1 - Introduction to Serious Games
1.2 - Motivation and Goals
2 - Training Oriented Design
2.1 - Approaches to Gamification
2.2 - Methodology and Effectiveness
3 - The Learning Process
3.1 - Gameflow and Progress
3.2 - Game Based Assessment
4 - Fields of Study
4.1 - Educational Applications
4.2 - Simulation and Skill Mastery
4.3 - Therapy Tools

Subject planning could be modified due unforeseen circumstances (group performance, availability of resources, changes to academic calendar etc.) and should not, therefore, be considered to be definitive.

TEACHING AND LEARNING METHODOLOGIES AND ACTIVITIES:

Teaching and learning methodologies and activities applied:

Theory/ Practice Sessions:

During these sessions, the contents featured in the subject will be exposed using resources like whiteboards, slideshows, etc., to show examples and illustrate properly the different sections. Additionally, active involvement will be encouraged through theoretical or real life case discussion. These sessions will be supported by different exercises.

Individual/ Team Exercises:

A part of the overall score will depend on individual exercises dealing with the different sections studied. These exercises will involve programming or tool usage and they are meant not to be independent, but interrelated, as new content is presented/ added in the course. Each exercise will consist of a set of instructions and certain results to be delivered before a specific date. Apart from individual work, a group activity will be developed forming teams and under similar conditions.

Tests/ Exams:

A written test will act as a theory/ practice assessment method, covering the content in the subject. The main purpose of this test is evaluating the knowledge acquired and underlying the processes and cases studied and explored in both lectures and exercises.

Tutorials:

The students will take part, on demand, in tutorials to be conducted on Fridays at 11:00 AM, but schedules may vary according to particular necessities or circumstances. The main goal pursued is to clear up doubts, and help students strengthen the knowledge and skills to be acquired. Just like with other subjects, the PDU is a useful communication tool to ask for/ share information on the course.

Student work load:

Teaching mode	Teaching methods	Estimated hours
Classroom activities	Master classes	36
	Practical work, exercises, problem-solving etc.	11
	Laboratory practice	12
	Assessment activities	4
	Extra-curricular activities (visits, conferences, etc.)	4
Individual study	Tutorials	4
	Individual study	35
	Individual coursework preparation	30
	Compulsory reading	14
Total hours:		150

ASSESSMENT SCHEME:

Calculation of final mark:

Written tests:	50 %
Individual coursework:	25 %
Group coursework:	20 %
Final exam:	5 %
TOTAL	100 %

*Las observaciones específicas sobre el sistema de evaluación serán comunicadas por escrito a los alumnos al inicio de la materia.

BIBLIOGRAPHY AND DOCUMENTATION:

Basic bibliography:

CANON-BOWERS, Jan, BOWERS, Clint. Serious Game Design and Development. Hershey, New York: Information Science Reference, 2010

Recommended bibliography:

MA, Minhua, OIKONOMOU, Andreas, JAIN, Lakhmi C. Serious Games and Edutainment Applications, Volume 1. London: Springer, 2011

MA, Minhua, OIKONOMOU, Andreas. Serious Games and Edutainment Applications, Volume 2. London: Springer, 2017

Recommended websites:

Serious Games Society	https://seriousgamesociety.org/
Serious Play Conference	https://seriousplayconf.com/