

# Teaching guide

## IDENTIFICATION DETAILS

Degree:	Expert Technical Artist (UFV-Awarded Title associated with the Video Game Creation)		
Faculty/School:	Communication Science		
Course:	ADVANCED GRAPHIC MOTORS		
Type:	Compulsory Internal	ECTS credits:	3
Year:	2	Code:	46114
Teaching period:	Third semester		
Teaching type:	Classroom-based		
Language:	English		
Total number of student study hours:	75		

Teaching staff	E-mail
Pablo Gutiérrez Sánchez	pablo.gutierrez@ufv.es
Irene Camps Ortueta	irene.camps@ufv.es

## SUBJECT DESCRIPTION

En esta asignatura se aprenderán las funcionalidades típicas de un motor de desarrollo de videojuegos. Dando visibilidad a todos los elementos y funcionalidades del programa necesarias para llevar a cabo la producción de un videojuego.

This course will explore the main functionalities of a video game development engine. All necessary elements to carry out the production of an easy video game will be explained, tested and mastered.

## GOAL

To be familiar with different functionalities on video game's engines. Develop fluency when navigating the interface and the elements of different scenes. As well as the integration of resources, 3D models, audio insertion, materials, shaders and particles.

## PRIOR KNOWLEDGE

- Fundamentos básicos de programación

## COURSE SYLLABUS

1. Graphic Engine's interface.
2. Components: Life cycle and component's relationship.
3. Materials.
4. Level Creations.
5. Sound.
6. Illumination.
7. Particles.
8. Physics.

## EDUCATION ACTIVITIES

Training activities, as well as the distribution of working times, can be modified and adapted according to the different scenarios established following the indications of the health authorities.

**PARTICIPATORY LESSON:** Unlike the classic master class, in which the weight of the teaching falls on the teacher, in the participative master class we seek to move the student from a passive attitude to an active one, encouraging their participation. To do this, it is necessary for the teacher to structure the content well, have clarity of presentation and be able to maintain the attention and interest of the student.

**AUTONOMOUS WORK.** In this methodology the student takes the initiative with or without the help of others (teachers, colleagues, tutors, mentors). It is the student who diagnoses his/her learning needs, formulates his/her learning goals, identifies the resources he/she needs to learn, chooses and implements the appropriate learning strategies and evaluates the results of his/her learning. The teacher thus becomes the guide, the facilitator and a source of information to assist in this autonomous work. This methodology will be of special interest for the development of competencies related to research

**COOPERATIVE WORK IN SMALL GROUPS:** The number of students programmed at our University allows us to work in small groups. Slavin defines cooperative work as "instructional strategies in which students are divided into small groups and are evaluated according to the productivity of the group", that puts into play both individual responsibility and positive interdependence, the basis of professional teamwork.

**TUTORIAL ACTION SYSTEM:** which includes interviews, discussion groups, self-reports and tutorial follow-up reports.

**RESEARCH:** Search for information from various sources and documents, analysis and synthesis of data and development of conclusions.

## DISTRIBUTION OF WORK TIME

CLASSROOM-BASED ACTIVITY

INDEPENDENT STUDY/OUT-OF-CLASSROOM ACTIVITY

## SKILLS

Conocimiento de las funcionalidades avanzadas del motor gráfico, adquiriendo pleno conocimiento de cada una de sus partes lo que le preparara para su integración en un equipo multidisciplinar dentro una producción profesional.

Capacidad para navegar por proyectos profesionales de gran envergadura y realizar modificaciones y mejoras al mismo en base a unos requisitos específicos.

## LEARNING RESULTS

Realización de mejoras sobre proyectos ya desarrollados, modificando, ajustando y puliendo valores, entidades y componentes para extender o ampliar su contenido.

Creación de un proyecto avanzado de juego donde poner en práctica los conocimientos adquiridos.

## LEARNING APPRAISAL SYSTEM

Attendance: Must be over 80%.

Grades must be above 5 in all parts.

Grading elements:

- 75% Exercises and individual work.
- 25% Classroom performance.

Extraordinary evaluation:

- Delivery and defence of individual work.

“Sistema de evaluación del aprendizaje en remoto”

Grades must be above 5 in all parts.

Grading elements:

- 75% Exercises and individual work.
- 25% Virtual Campus performance.

Extraordinary evaluation:

- Delivery and defence of individual work.

All final evaluation defenses will be presential.

Las conductas de plagio, así como el uso de medios ilegítimos en las pruebas de evaluación, serán sancionados conforme a los establecido en la Normativa de Evaluación y la Normativa de Convivencia de la universidad.

## BIBLIOGRAPHY AND OTHER RESOURCES

### Basic

BOND, Jeremy Gibson (2018) Introduction to Game Design, Prototyping and Development. Addison-Wesley.

### Additional

LUKOSEC, G. (2016) Learning C# by Developing Games with Unity 5.x

HOCKING, J. (2015). Unity in Action: Multiplatform Game Development in C# with Unity 5. Manning Publications.

SAPIO, F. (2015) Unity UI Cookbook.

<https://docs.unity3d.com/es/current/Manual/index.html>