



Information about the subject

Degree: Degree in Design and Narration in Animation and Video games

Faculty: Faculty of Legal, Economic and Social Sciences

Code: 2050324 **Name:** Programming foundations

Credits: 6,00 **ECTS Year:** 3 **Semester:** 1

Module: VIDEO GAME PROGRAMMING

Subject Matter: FUNDAMENTALS OF PROGRAMMING **Type:** Compulsory

Department: Multimedia and Digital Arts

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

2053A David Ponce Segura (**Responsible Lecturer**)

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Module organization

VIDEO GAME PROGRAMMING

Subject Matter	ECTS	Subject	ECTS	Year/semester
FUNDAMENTALS OF PROGRAMMING	12,00	Arithmetic foundations of video game programming	6,00	3/1
		Programming foundations	6,00	3/1
PROGRAMMING	30,00	2D video game programming	6,00	3/2
		3D video game programming	6,00	4/1
		Artificial intelligence	6,00	4/1
		Online game programming	6,00	4/1
		Virtual reality	6,00	4/2

Recommended knowledge

None beyond basic computer management (file and folder concepts, etc.).



Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 To use the basic vocabulary specific to the area of programming languages.
- R2 To organise the logical problems of the video game into units that can be solved by means of programming languages.
- R3 To construct flowcharts that solve computational tasks.
- R4 To develop basic computer programs that can be part of a videogame

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

SPECIFIC		Weighting			
		1	2	3	4
E20	To develop the basic programming code necessary to the construction of a videogame.				X
E22	To apply the necessary programming fundaments to the design of videogames.				X



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
	50,00%	Written tests
	30,00%	Practical tests
	20,00%	Elaboration of projects

Observations

In accordance with the development guidelines of the General Regulations for the Evaluation and Qualification of Official Teachings and Own Degrees of the UCV, in face-to-face degrees, class attendance with a minimum of 80% of the sessions of each subject will be required as a requirement. to be evaluated. This means that, if a student does not attend the sessions of each subject, in a percentage greater than 20%, he/she will not be able to be evaluated, neither in the first nor in the second call, unless the person responsible for the subject, with the approval of the person responsible for degree, in view of duly justified exceptional circumstances, exempt from the minimum attendance percentage. The same criterion will be applicable for hybrid or virtual degrees in which teachers must maintain the same percentage in the requirement of "presence" in the different training activities, if any, even if these are carried out in virtual environments.

The mention of "Honors" may be awarded to students who have obtained a grade equal to or greater than 9.0. Their number may not exceed five percent of the students enrolled in a group in the corresponding academic year, unless the number of students enrolled is lower.

According to article 9 of the General Regulations for the Evaluation and Qualification of Official Teachings and Own Degrees of the UCV, the continuous evaluation system is the preferred evaluation system at the UCV. The art. 10 allows, however, for those students who in a justified and accredited manner express their inability to attend in person (or to synchronous communication activities for virtual and/or hybrid teaching modalities), their evaluation on an extraordinary basis in the so-called single evaluation. Said single evaluation must be requested within the first month of each semester to the Dean of Faculty through the Vice-Deaneries or Master's Directorates, with the express decision on the admission of said request from the student concerned being the responsibility of the latter.

For this subject, the evidence to be presented and/or the test/s to be carried out in the single evaluation by the student that are established are: Completion of theoretical-practical activities 60% and Final exam 40%.



CLASS ATTENDANCE IN FACE-TO-FACE DEGREES

In accordance with the development guidelines of the General Regulations for the Evaluation and Qualification of Official Teachings and Own Degrees of the UCV, in face-to-face degrees, class attendance with a minimum of 80% of the sessions of each subject will be required as a requirement to be evaluated. This means that, if a student does not attend the sessions of each subject, in a percentage greater than 20%, he/she will not be able to be evaluated, neither in the first nor in the second call, unless the person responsible for the subject, with the approval of the person responsible for degree, in view of duly justified exceptional circumstances, exempt from the minimum attendance percentage. The same criterion will be applicable for hybrid or virtual degrees in which teachers must maintain the same percentage in the requirement of "presence" in the different training activities, if any, even if these are carried out in virtual environments.

MENTION OF DISTINCTION:

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Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M2 Participatory master class
- M4 Problem solving activities
- M6 Project-based learning



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Active listening, summaries, concept maps and/or notes organizing the information and work in small groups (Kagan structures) to process the received information.		36,00	1,44
Use of the learnt theory in simulated or real circumstances.		60,00	2,40
The student, individually or in a group, leads their action to the elaboration of a tangible final result (product) in which process knowledges and needed competences are incorporated.		24,00	0,96
TOTAL		120,00	4,80

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
Autonomous work. Study, memorization, test preparation, practical abilities drilling, elaboration of works, essays, reflections, metacognitions, portfolios elaboration, ...		10,00	0,40
The student, individually or in a group, leads their action to the elaboration of a tangible final result (product) in which process knowledges and needed competences are incorporated.		10,00	0,40
Use of the learnt theory in simulated or real circumstances.		10,00	0,40
TOTAL		30,00	1,20



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
Content	IntroductionDrawVariablesControl structuresFunctionsMotionInteractivityArrays and Objects

Temporary organization of learning:

Block of content	Number of sessions	Hours
Content	60,00	120,00

References