



## Information about the course

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

**Faculty:** Faculty of Legal, Economic and Social Sciences

**Code:** 2051220 **Name:** 3D Character Animation I

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

**Module:** MODELADO Y ANIMACIÓN EN TRES DIMENSIONES.

**Subject Matter:** ANIMACIÓN EN TRES DIMENSIONES **Type:** Obligatoria

**Branch of knowledge:**

**Department:** Multimedia and Digital Arts

**Type of learning:** Classroom-based learning

**Language/-s in which it is given:** Spanish

**Teachers:**

2053A      Santiago Garau De Meer (**Profesor responsable**)

[santiago.garau@ucv.es](mailto:santiago.garau@ucv.es)



## Module organization

### MODELADO Y ANIMACIÓN EN TRES DIMENSIONES.

Subject Matter	ECTS	Subject	ECTS	Year/semester
MODELADO EN TRES DIMENSIONES	24	3D Digital sculpture and character modelling I	6	2/2
		3D Digital sculpture and character modelling II	6	3/1
		3D modelling and representation I	6	1/2
		3D modelling and representation II	6	2/1
ANIMACIÓN EN TRES DIMENSIONES	18	3D Animation	6	2/2
		3D Character Animation I	6	3/1
		3D Character Animation II	6	3/2

## Recommended knowledge

It is essential to take the subject Character Animation I to have passed the subjects 3D Animation and Character Modeling and Digital Sculpting I

## Other types of requirements

- Es recomendable para cursar la asignatura Animación en 3D haber superado las asignaturas Modelado y representación en 3D I y Modelado y representación en 3D II.
- Es recomendable para cursar la asignatura Animación de personajes en 3D I haber superado las asignaturas Animación en 3D y Modelado de personajes y esculpido digital en 3D I.
- Es recomendable para cursar la asignatura Animación de personajes en 3D II haber superado la asignatura Animación de personajes en 3D I.



## Learning outcomes

At the end of the course, the student must demonstrate having acquired the following learning outcomes:

R10 - Use the specific vocabulary acquired in the course. 4.12

Learning outcomes of the specified title

**Type of AR:** Competencias

- Be able to convey information, ideas, problems, and solutions to both specialized and non-specialized audiences.

R12 - Develop three-dimensional character animations following the basic principles of animation. 12.52

Learning outcomes of the specified title

**Type of AR:** Habilidades o Destrezas

- Illustrate and generate specific animation and video game projects using traditional procedures and digital techniques

R13 - Create animated character videos, adjusting export parameters (size, FPS speed, resolution, global illumination, quality, etc.) 12.53

Learning outcomes of the specified title

**Type of AR:** Habilidades o Destrezas

- Illustrate and generate specific animation and video game projects using traditional procedures and digital techniques



R14 - Prepare basic character animations to be included in video games. 12.54

Learning outcomes of the specified title

**Type of AR:** Habilidades o Destrezas

- Illustrate and generate specific animation and video game projects using traditional procedures and digital techniques

R8 - Produce a piece of work that expresses original ideas and proposals for three-dimensional animations using organic objects, taking into account the sincere search for the whole truth and the integration of all dimensions of the human being in the face of life's big questions, applying the principles derived from the concept of integral ecology and respecting and putting into practice the ethical principles and proposals for action derived from the sustainable development goals. RA9.22 / RA6.18 / RA7.18/ RA8.20

Learning outcomes of the specified title

**Type of AR:** Competencias

- Apply the principles derived from the concept of integral ecology to their proposals or actions, regardless of their scope, area of knowledge, and the contexts in which they are presented.
- Develop original and innovative ideas and proposals in the area of animation and video game design and storytelling, in the work required for a project, combining conceptual and technical aspects.
- Develop theoretical and practical responses based on the sincere search for the full truth and the integration of all dimensions of the human being in response to life's major questions.
- Respect and implement the ethical principles and action proposals derived from the Sustainable Development Goals, applying them to all academic and professional activities.

R9 - Applying new trends in the animation of organic three-dimensional objects.

9.23

Learning outcomes of the specified title



---

**Type of AR:** Competencias

- Develop original and innovative ideas and proposals in the area of animation and video game design and storytelling, in the work required for a project, combining conceptual and technical aspects.

---



## Assessment system

### In-person modality

Assessed learning outcomes	Granted percentage	Assessment tool
R8, R9, R10, R11, R12, R14	20,00%	SE1 – Written exams.
R8, R9, R11, R12, R14	20,00%	SE6 – Practical exams.
R8, R9, R11, R12, R14	60,00%	SE8 – Project development.

### Observations

#### Continuous assessment

Attendance is compulsory for this type of assessment.

In addition, it is essential to have completed and submitted all course activities before the final exam.

#### Single assessment

In accordance with Article 9 of the General Regulations for Assessment and Grading of Official Courses and UCV Degrees, single assessment is linked to the inability of students enrolled in a face-to-face degree program to attend classes. It is, therefore, an extraordinary and exceptional assessment system available to students who, for justified and accredited reasons, are unable to undergo the continuous assessment system and who request it from the professor responsible for the course, who will expressly decide on the admission of the student's request for single assessment and will notify them of its acceptance or rejection.

As far as the subject of 3D Character Animation I is concerned, the minimum attendance requirement is 80%, which is therefore the limit to be taken into consideration for any potential request for a single assessment. If granted, this will be based on the following criteria for both the first and second attempts:

- Delivery of two rigging projects, detailed below:



1. Creation of a digital skeleton (rig) for a provided model (Walker), with all the controllers necessary for animation, including two functional deformers implemented as attributes of said controllers. In addition, the student must create two animations (walk cycle and run cycle).

2. Creation of a digital skeleton (rig) of a provided anthropomorphic character model, with all the controllers necessary for animation, including a system of facial deformers to modify the character's expressions.

#### Use of Artificial Intelligence

In the development of the activities for this course, the use of artificial intelligence is limited solely to the creation of written texts. Under no circumstances will any practical work or project in which artificial intelligence has been used as a resource be accepted.

#### MENTION OF DISTINCTION:

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.

### Training activities

The methodologies to be used so that the students reach the expected learning outcomes will be the following:

M2 MD2: Interactive lecture

M4 MD4: Problem-solving exercises

M6 MD6: Project-based learning

#### IN-CLASS TRAINING ACTIVITIES

ACTIVITY	RELATIONSHIP WITH THE COURSE LEARNING OUTCOMES	METHODOLOGY	HOURS	ECTS
AF2 – Active listening, elaboration and formulation of questions, summaries, concept maps and/or notes that organize the information received, and related work.	R8, R9, R11, R12, R14	MD2: Interactive lecture MD6: Project-based learning	9,00	0,36



AF6 – The student, individually or collectively, focuses on producing a tangible final result (product) that incorporates the knowledge and skills necessary for its realization.	R8, R9, R11, R12, R14	MD2: Interactive lecture MD6: Project-based learning	51,00	2,04
<b>TOTAL</b>			<b>60,00</b>	<b>2,40</b>

#### TRAINING ACTIVITIES OF AUTONOMOUS WORK

ACTVITY	RELATIONSHIP WITH THE COURSE LEARNING OUTCOMES	METHODOLOGY	HOURS	ECTS
AF8 – Independent work. Study, memorization, exam preparation, practice of practical skills, preparation of assignments, essays, reflections, metacognitive activities, portfolio development, etc.	R8, R9, R11, R12, R14	MD2: Interactive lecture MD4: Problem-solving exercises MD6: Project-based learning	13,00	0,52
AF6 – The student, individually or collectively, focuses on producing a tangible final result (product) that incorporates the knowledge and skills necessary for its realization.	R8, R9, R11, R12, R14	MD2: Interactive lecture MD4: Problem-solving exercises MD6: Project-based learning	77,00	3,08
<b>TOTAL</b>			<b>90,00</b>	<b>3,60</b>



## Description of contents

Description of content necessary for the acquisition of learning outcomes.

### Theoretical content:

Block of content	Contents
1st Block	<p>The course covers the basics of three-dimensional animation applied to digital characters.</p> <ul style="list-style-type: none"><li>• Construction of the three-dimensional skeleton (rigging) using a solid and consistent system of bones and controllers.</li><li>• Definition of the different joints with their corresponding dynamics and parameters using inverse kinematics systems. Application of constraints in the system controllers to facilitate correct animation.</li><li>• Development of a character's movement cycles (walking cycle).</li><li>• Animation of gestures and postures that add personality to the model, whether organic or inorganic.</li><li>• Techniques for simplifying animation processes.</li></ul>

### Temporary organization of learning:

Block of content	Sessions	Hours
1st Block	30	60,00

## References