Information about the course

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

Faculty: Faculty of Legal, Economic and Social Sciences

Code: 2051216 **Name:** 3D Animation

Credits: 6,00 ECTS **Year:** 2 **Semester:** 2

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:

2052A	Santiago Garau De Meer **(Profesor responsable)**	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

This subject aims to provide students with a solid understanding of the fundamental principles and techniques of three-dimensional animation. Throughout this course, we will explore the theoretical bases of 3D animation, along with Autodesk Maya tools and software. Students will have the opportunity to apply this knowledge in hands-on projects that will foster the development of essential skills in visual storytelling and animated content creation.
Although it is not mandatory, the following knowledge is recommended: **- Basic Principles of Graphic Design and Art:** Having a solid understanding of the fundamentals of graphic design and artistic techniques will help you create attractive and effective visual animations. This includes concepts such as composition, color, shape and proportion. **- Visual Storytelling Concepts:** 3D animation is often used to tell stories. Knowing the principles of visual storytelling, such as plot structure, characterization, and character development, will allow you to create more impactful and meaningful animations. **- Have passed the subject Modeling and 3D rendering I and II.** Although it is not mandatory, it is highly recommended to start with a basic knowledge and graphic assimilation of 3D software.
We hope this guide is a useful tool for your 3D animation journey, and that it inspires you to explore the intersection between art and technology in creating virtual worlds.

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:

-

Learning outcomes of the specified title

Type of AR:

-

Assessment system

In-person modality

Assessed learning outcomes	Granted percentage	Assessment tool
R4, R5, R7	20,00%	SE1 – Written exams.
R1, R2, R3, R4, R5, R6, R7	20,00%	SE6 – Practical exams.
R1, R2, R3, R4, R5, R6, R7	60,00%	SE8 – Project development.

Observations

Continuous assessment
Attendance is compulsory for this type of assessment. In order for students to be assessed using this system, they must attend at least 80% of the face-to-face sessions.
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 that may be chosen by 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 subject, 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 3D Animation course 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 exam sessions:

·Submission of two animation projects, detailed below:

1.Animation of objects taking into account their physics and behavior, as well as the principles of animation learned in the course. Bouncing balls (elastic and rigid), car/vehicle accelerating and braking.

2.Implementation of the animations in an interactive environment developed with Unreal Engine.

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 be accepted in which artificial intelligence has been used as a resource.

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

ACTVITY	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.	R1, R2, R3, R4, R5, R6, R7	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.	R1, R2, R3, R4, R5, R6, R7	MD2: Interactive lecture MD6: Project-based learning	51,00	2,04
TOTAL			**60,00**	**2,40**

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.	R1, R2, R3, R4, R5, R6, R7	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.	R1, R2, R3, R4, R5, R6, R7	MD4: Problem-solving exercises MD6: Project-based learning	77,00	3,08
TOTAL			**90,00**	**3,60**

Description of contents

Description of content necessary for the acquisition of learning outcomes.

Theoretical content:

Block of content	Contents
1st Block - Introduction to 3D animation. Basics	Animation tools and basics
2nd Block - Direct and inverse kinematics	Direct application of the previous knowledge acquired by creating 3D animations in inorganic objects through bone systems and direct and inverse kinematics.
3rd Block - Advanced Animation | Unreal Engine	Students will learn about advanced animation tools and techniques, implementing them in video game engines.

Temporary organization of learning:

Block of content	Sessions	Hours
1st Block - Introduction to 3D animation. Basics	5	10,00
2nd Block - Direct and inverse kinematics	10	20,00
3rd Block - Advanced Animation | Unreal Engine	15	30,00

References