UAB
Universitat Autònoma de Barcelona

2023/2024

Advanced Animation

Code: 104744
ECTS Credits: 6

Degree	Type	Year	Semester
2503873 Interactive Communication	OB	3	2

Contact

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Teaching groups languages

You can check it through this link. To consult the language you will need to enter the CODE of the subject. Please note that this information is provisional until 30 November 2023.

Teachers

Lluis Domingo Soler

Prerequisites

Have passed the credits of the subject "Fundamentals of animation"

Objectives and Contextualisation

Improve knowledge of 3D animation techniques

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Act within one's own area of knowledge, evaluating sex/gender-based inequalities.
- Associate mathematical and physical processes and theories, and their application to the world of databases, with the creation of interfaces and with augmented virtual reality.
- Devise, create, activate and integrate virtual and augmented-reality spaces, characters and objects.
- Introduce changes in the methods and processes of the field of knowledge to provide innovative responses to the needs and demands of society.
- Manage time efficiently and plan for short-, medium- and long-term tasks.

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- Search for, select and rank any type of source and document that is useful for creating messages, academic papers, presentations, etc.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Analyse the sex-/gender-based inequalities and gender bias in one's own area of knowledge.
3. Animate characters in 2D and 3D, beginning with manual methods and eventually using the most sophisticated software in existence.
4. Apply the concepts of physics and mathematics to create and animate credible characters.
5. Communicate using language that is not sexist or discriminatory.
6. Consider how gender stereotypes and roles impinge on the exercise of the profession.
7. Cross-check information to establish its veracity, using evaluation criteria.
8. Distinguish the salient features in all types of documents within the subject.
9. Find what is substantial and relevant in documents of all types on the fundamental principles of animation.
10. Identify situations in which a change or improvement is needed.
11. Plan and conduct academic studies on animation for the virtual world.
12. Propose new methods or well-founded alternative solutions.
13. Propose new ways to measure the success or failure of the implementation of innovative proposals or ideas.
14. Propose projects and actions that are in accordance with the principles of ethical responsibility and respect for fundamental rights and obligations, diversity and democratic values.
15. Propose projects and actions that incorporate the gender perspective.
16. Show expertise in shot composition and character creation, and in the techniques of facial animation.
17. Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
18. Submit course assignments on time, showing the individual and/or group planning involved.
19. Weigh up the risks and opportunities of both one's own and other people's proposals for improvement.

Content

- Introduction to advanced animation
- Pipeline, workflow and roles within the industry
- Conceptualization and preparation of the animation
- CGI software
- 3D modeling
- Shading, lighting, cameras and rendering
- Basic rigging
- Rigging complex
- Basic animation
- Dynamic animation
- Simulations and effects
- Composition
- Resources

Methodology

The main theme of the course will be the creation of a group animation project.
The student will have to carry out several exercises distributed in the diff
We will introduce the concepts from the analysis of case studies.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Laboratory practices	30	1.2	3, 4, 5, 16, 11, 18, 15, 6
Master classes with ICT support	15	0.6	1, 10, 19, 12, 13, 14
Type: Supervised			
Pitching	3	0.12	5, 18, 14
Preparation of the final presentation	6	0.24	5, 7, 8, 18, 14, 17, 9, 6
Type: Autonomous			
Project production	87	3.48	2, 3, 4, 5, 7, 8, 16, 11, 18, 13, 14, 15, 6

Assessment

This subject doesn't provide for the single assessment system.

The evaluation will be distributed as follows:
Class attendance and participation (20%)
Individual practical exercises (30%)
Individual final project (50%)
In order to evaluate the final project, it is mandatory to submit all the prac
In order to be able to assess the practical exercises, it is necessary to att
The final project consists of an elevator pitch where each group will prese

In the event that the student performs any irregularity that may lead to a significant variation of an evaluation act,

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Class attendance and participation	20%	3	0.12	2, 5, 7, 8, 18, 15, 17, 6
Delivery of individual works	30%	3	0.12	2, 1, 10, 19, 18, 12, 13, 14, 9
Final project	50%	3	0.12	2, 1, 3, 4, 5, 7, 8, 16, 10, 11, 19, 18, 12, 13, 14, 15, 17, 9, 6

Bibliography

Williams, Richard. The Animator's Survival Kit (Expanded Edition)

Software

3D animation programs will be used (such as Blender or Real Engine)