

Course Unit	3D Animation			Field of study	Audiovisuals and Media Production		
Bachelor in	Multimedia			School	School of Public Management, Communication and Tourism		
Academic Year	2022/2023	Year of study	3	Level	1-3	ECTS credits	6.0
Type	Semestral	Semester	1	Code	9213-656-3101-00-22		
Workload (hours)	162	Contact hours	T - TP 60 PL - TC - S - E - OT - O -				

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Jessica Maria Carvalho Carrico

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Acquire advanced knowledge of 3D animation software (Blender 3D);
2. Develop creative capacities for the integration of previous modeling (3D Design, Digital Architecture and designing characters) in 3D animations;
3. Understanding the fundamental concepts of animation;
4. Understanding the building mechanisms of a complete character Rig;
5. Understanding the placement and the importance of animation in the production of multimedia contents;
6. Acquire advanced knowledge of the methods and techniques used by the industry.

Prerequisites

Before the course unit the learner is expected to be able to:
Understand the basic concepts of traditional animation.

Course contents

Exhaustion of the basic golden rules of animation developed in the beginning of the twentieth century with traditional animation. Basic and advanced 3D animation techniques in Blender. Understanding the value and status of 3D Animation in the industry. Animation Practice.

Course contents (extended version)

1. Introduction to 3d animation
 - Different uses and applications of 3D animation
 - History of 3d animation
 - Importance of modeling in 3d animation
 - Difference between creativity, technique and expression in 3d animation
2. Simple and advanced techniques of 3D animation in Blender:
 - Understanding keyframe animation
 - Relationship between objects and hierarchies
 - Simple object animations(move, rotate, scale, visibility)
 - Animating with an advanced character Rigs.
 - Construct complex rigs using constraints, drivers and modifiers
 - Expressive animation using shape keys
 - Animation using Motion Capture

Recommended reading

1. Parent, R. (2012). Computer animation algorithms and techniques. San Francisco, Calif: Morgan Kaufmann. [ISBN: 0124158420]
2. Hess, R. (2010). Blender foundations the essential guide to learning Blender 2. 6. Burlington, MA: Elsevier. [ISBN: 0240814304]
3. Hess, R. (2013). Blender production : creating short animations from start to finish. Burlington, MA: Focal Press. [ISBN: 0240821459]
4. Wartmann, C. & Kauppi, M. (2009). The Blender gamekit. Amsterdam San Francisco, CA: Blender Foundation Distributed by No Starch Press. [ISBN: 1593272057]
5. Williams, R. (2009). The animator's survival kit. New York: Faber and Faber. [ISBN: 0865478978]

Teaching and learning methods

Content exposition, in structured transmission knowledge; Interrogative method, asking the students systematically in order to develop critical capacity; Demonstrative method with practical application by students; Active method, solving exercises in order to allow greater consolidation of knowledge.

Assessment methods

- DISTRIBUTED EVALUATION: - (Regular, Student Worker) (Final, Supplementary, Special)
 - Practical Work - 60% (Assignments done during class or at home.)
 - Projects - 40% (Final project of animation.)

Language of instruction

1. Portuguese
2. English

Electronic validation

Jessica Maria Carvalho Carrico	Ana Lucia Jesus Pinto	Carlos Sousa Casimiro da Costa	Luisa Margarida Barata Lopes
06-10-2022	07-10-2022	12-10-2022	14-10-2022