

Course Unit	Digital Architecture	Field of study	Visual Arts
Bachelor in	Game Design	School	School of Public Management, Communication and Tourism
Academic Year	2022/2023	Year of study	2
Type	Semestral	Semester	1
Workload (hours)	162	Contact hours	T - , TP 30, PL 30, TC - , S - , E - , OT - , O -
Level		1-2	ECTS credits 6.0
Code		8309-414-2101-00-22	

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) Rogerio Paulo Azevedo Moreira Silva Gomes

Learning outcomes and competences

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

1. Know fundamental historical and theoretical concepts in architecture;
2. Acquire competencies of 3D modelling in Blender for architecture;
3. Develop creative ability to make digital games' architecture – Art Concepts and 3D;
4. Develop competencies in the analysis of worlds present in digital games.
5. Teamwork and communication

Prerequisites

Before the course unit the learner is expected to be able to:
Mastery of the basics and introductory Blender 3D

Course contents

Introduction to the history and theory of architecture: fundamental elements of architecture; brief view of architectural styles; urban models and urban utopias. Specific development of 3D architecture and world modelling in Blender.

Course contents (extended version)

1. Introduction to the history and theory of architecture:
 - Fundamental elements of architecture;
2. Brief view of architectural styles:
 - Recognizing Egyptian architecture;
 - Recognizing Greek architecture;
 - Recognizing Roman architecture;
 - Recognizing Medieval architecture (Romanic and Gothic);
 - Recognizing Renaissance architecture;
 - Recognizing Baroque architecture;
 - Recognizing Neoclassical and Romantic architecture;
 - Recognizing Modern architecture;
 - Recognizing Post-modern architecture;
 - A few elements of non-western architecture;
3. Urban models (organic, classical, garden, modern);
4. Urban utopias;
5. Level design;
6. Specific development of 3D architecture and world modelling in Blender:
 - conception
 - Modelling;
 - Materials and lighting;
 - Textures.

Recommended reading

1. Felinto, D. & Pan, M. (2013). Game Development with Blender. Boston, MA: Cengage Learning. [ISBN: 1435456637]
2. Pardew, Les (2005) Beginning Illustration and Storyboarding for Games: Thomson Course Technology. [ISBN: 1592004954]
3. Roth, L. M. (2000). Entender la Arquitectura: Sus Elementos, Historia y Significado. Barcelona: Gustavo Gili. [ISBN: 8425217008]
4. Borries, F. von, Walz, S. P. , & Böttger, M. (2007). Space Time Play: Computer Games, Architecture and Urbanism: The Next Level. London: Springer Science & Business Media. [ISBN: 9783764384142]
5. Totten C. W. (2019). Architectural Approach to Level Design. : Boca Raton, CRC Press. [ISBN: 9781351116282]

Teaching and learning methods

- Content exposition, with the aid of different architectural examples. - Questioning, in order to develop critical skills. - Active method, when the student solves exercises and completes assignments.

Assessment methods

1. DISTRIBUTED EVALUATION - (Regular, Student Worker) (Final, Supplementary, Special)
 - Case Studies - 8% (Individual work: technical charts of architectural elements' recognition in digital games.)
 - Development Topics - 35% (Group work: analysis of a game relating it to an architectural style.)
 - Practical Work - 52% (Group work: work proposal and 3D development of a creative set in Blender.)
 - Projects - 5% (Interdisciplinary Week)
2. Erasmus Students - DISTRIBUTED EVALUATION - (Regular, Student Worker) (Final, Supplementary, Special)
 - Case Studies - 8% (Individual work: technical charts of architectural elements' recognition in digital games.)
 - Development Topics - 35% (work: analysis of a game relating it to an architectural style.)
 - Practical Work - 52% (Group work: work proposal and 3D development of a creative set in Blender.)
 - Practical Work - 5% (Interdisciplinary Week)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Rogério Paulo Azevedo Moreira Silva Gomes	Barbara Costa Vilas Boas Barroso	Carlos Sousa Casimiro da Costa	Luisa Margarida Barata Lopes
24-10-2022	24-10-2022	24-10-2022	30-10-2022