

Course Unit	Elective 3 - Level design & game balancing		Field of study	Arts/Game Design/Computing/Social and Business Sciences	
Master in	Digital Game Design and Development		School	School of Public Management, Communication and Tourism	
Academic Year	2023/2024	Year of study	1	Level	2-1
Type	Semestral	Semester	2	ECTS credits	6.0
Workload (hours)	162	Contact hours	T -	TP 30	PL -
			TC -	S -	E -
			OT -	O -	
<small>T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other</small>					

Name(s) of lecturer(s) Barbara Costa Vilas Boas Barroso, 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. Identify and reflect critically on level design elements (gameplay, narrative, art, technology, player experience) and genre archetypes;
2. Understand how level design has evolved and contributes to a player's experience;
3. Explore theory of games, shape composition, environment architecture, and player psychology to iterate on level setups from the initial planning phases to playable prototypes;
4. Recognize and follow common milestones in the level design process, as well as know key roles involved;
5. Effectively use the iterative cycle for game balancing;
6. Craft player immersion and create level progressions that support narrative and character development;
7. Understand the dialectic balance/progression in PvE games vs. PvP games.

Prerequisites

Not applicable

Course contents

Introduction to Level Design; Player motivation and investment; Introduction to Game Balancing; Critical vocabulary; Impacts; Strategies; Case studies and application.

Course contents (extended version)

1. Introduction to Level Design
 - Fundamental Concepts
 - Components
 - Activities
 - Processes
 - Evolution of level design
 - Genre implications
2. Player motivation and investment
 - Exploration design and guidance
 - Emotive design and progression
 - Narrative, conflict and combat
 - Narrative based level design vs. non-narrative based
3. Introduction to Game Balancing
 - Difficulty
 - Progression
 - Initial Conditions
 - Among multiple strategies
 - Between game objects
 - For fairness
4. Critical vocabulary
 - Possibility space
 - Curves
 - Solvability
 - Metagame balance
 - Systems
 - Interactions between systems
5. Impacts
 - Player vs. Player
 - Player vs. Environment
 - Gameplay vs. Gameplay
 - Level Design challenge
6. Strategies
 - Designer experience
 - Small-scale playtesting
 - Analytics
 - Heuristics
 - Balance between types of balance
7. Case studies and application

Recommended reading

1. Gazaway, D. (2021). Introduction to Game Systems Design (Game Design). 1st Edition. Pearson. ISBN: 978-0137440849.
2. Salmond, M. (2021). Video Game Level Design: How to Create Video Games with Emotion, Interaction, and Engagement. Bloomsbury Academic. ISBN: 978-1350015722
3. Schreiber, I. & Romero, B. (2021). Game Balance. 1st Edition. CRC Press. ISBN: 978-1498799577.
4. Sylvester, T. (2013). Designing Games: A Guide to Engineering Experiences. O'Reilly Media.
5. Totten, C. (2021). An Architectural Approach to Level Design: Second Edition. 2nd Edition. CRC Press. ISBN: 978-0815361367

Teaching and learning methods

The work sessions are based on the teaching and application of techniques and methodologies for: a) level design; b) game balancing, encouraging the related interpretation of these approaches. The following are involved: Active method, for solving exercises and developing work, in order to allow consolidation of knowledge; combined with Micro-exposition of content and Interrogative method.

Assessment methods

- FINAL EVALUATION - (Regular, Student Worker) (Final, Supplementary, Special)
- Practical Work - 50% (includes case study and redesign)
- Practical Work - 50% (comprises components aimed at the integrated project)

Language of instruction

1. Portuguese
2. English

Electronic validation

Barbara Costa Vilas Boas Barroso, Rogerio Paulo Azevedo Moreira Silva Gomes	João Paulo Pereira de Sousa	Carlos Sousa Casimiro da Costa	Luisa Margarida Barata Lopes
29-02-2024	19-03-2024	05-05-2024	08-05-2024