

Course Unit	Game ideation, design & development		Field of study	Game Design/Informatics	
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	1	ECTS credits	6.0
Code	5074-802-1102-00-23				
Workload (hours)	162	Contact hours	T -	TP 30	PL 15
			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) Anabela Neves Alves de Pinho, Barbara Costa Vilas Boas Barroso, Raquel Cristina Sousa Pires, Rogerio Junior Correia Tavares

### Learning outcomes and competences

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

1. Contextualize the area of digital games framing several types of classification;
2. Understand what a game is and the fundamental concepts associated;
3. Recognize and apply design and development methodologies for digital games;
4. Develop a global understanding about the concepts, steps, tools and processes of game design;
5. Develop a global understanding of game development and the various game programming paradigms;
6. Identify, analyze, categorize and evaluate existing systems and technology in the area of digital games;
7. Discern ethical and unethical behaviors in the practice of game design and development;
8. Operationalize knowledge in practical cases.

### Prerequisites

Before the course unit the learner is expected to be able to:  
Not applicable.

### Course contents

Games introduction. Design and development methodologies. Game design. Game development. Devices and technologies for Digital Games. Ethics and digital games.

### Course contents (extended version)

1. Introduction:
  - Origins of game design;
  - Historical milestones in the field of digital games;
  - The game as experience;
  - Player, game, interface;
  - Diversity of gameplay classifications and genres.
2. Design and development methodologies:
  - Waterfall methodologies;
  - Agile methodologies;
  - Comparative analysis of different approaches;
  - The problems of scale;
  - Implications for the work team.
3. Game design:
  - Principles and general concepts;
  - Different models;
  - Methods of ideation;
  - Documentation inherent to the process;
  - Perspectives on the support platform;
  - Perspectives on the player.
4. Game development:
  - Principles and general concepts;
  - Game programming paradigms;
  - Overview of tools and production cycles;
  - Technical documentation of development;
  - Tools for development.
5. Devices and technologies for Digital Games.
6. Ethics and digital games:
  - Case studies;
  - Ethical conduct in the practice of game design and development.

### Recommended reading

1. Bond, J. G. (2017). Introduction to Game Design, Prototyping, and Development: From Concept to Playable Game with Unity and C#.
2. Fullerton, T. (2018). Game Design Workshop: A Playcentric Approach to Creating Innovative Games, 4th Edition. A K Peters/CRC Press. ISBN: 978-1138098770.
3. Lemarchand, R. (2021). A Playful Production Process: For Game Designers (and Everyone). The MIT Press. ISBN: 978-0262045513.
4. Martinho, Carlos, Santos, Pedro, Prada, Rui, (2014). Design e Desenvolvimento de jogos, Editora FCA. ISBN: 9789727227624
5. Sellers, M. (2021). Advanced Game Design: A Systems Approach. 1st Edition. Addison-Wesley Professional. ISBN: 978-0134667607

### Teaching and learning methods

The teaching/learning process will be based on theoretical-practical/practical-laboratorial classes, to ensure reciprocal complementarity between theory and application.  
Expositive method, for transmission of knowledge in a structured and continuous way; Interrogative method, questioning the students systematically; Active method, for resolution of exercises and development of assignments.

### Assessment methods

- Final Evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
- Practical Work - 15% (Work Module 1 (minimum grade 7 values))
- Practical Work - 15% (Work module 2 (minimum grade 7 values))

Assessment methods

- Practical Work - 15% (Work module 3 (minimum grade 7 values))
- Practical Work - 15% (Work module 4 (minimum grade 7 values))
- Practical Work - 40% (Common work across all modules.)

Language of instruction

1. Portuguese

2. English

Electronic validation			
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12-10-2023	15-10-2023	13-11-2023	11-12-2023

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