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**INSTITUTO POLITÉCNICO DE BRAGANÇA**

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| Course Unit | Contemporary issues and digital games | | 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 | ECTS credits | 6.0 |
| Type | Semestral | Semester | 2 | Code | 5074-802-1205-00-23 | | |

| Workload (hours) | 162 | Contact hours | T | - | TP | 45 | PL | - | TC | - | S | - | E | - | OT | - | O | - |
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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, Rita Carolina Morais da Costa |
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### Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. - Articulate the various concepts and dimensions present in models about serious games.
2. - Design and specify the requirements of a digital serious game.
3. - Identify tools for design, development and prototyping of a serious game.
4. - Customize gamification technology solutions, adjusting and tailoring them according to the application domain.
5. - Ideate and create rapid prototypes of digital games as to the implementation of solutions to respond to the issues of contemporary society.
6. - Reflect critically on the approaches presented.

### Prerequisites

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

### Course contents

Presentation of the conceptual framework of serious games. Design and development of serious digital games. Application domains. Implementing gamification strategies.

### Course contents (extended version)

1. Concepts of serious games and the main models, framed by the issues of contemporary society.
2. Stages and techniques of design and development of serious digital games.
3. Application domains of Serious Games in the areas of sustainability and others application domains.
4. Defining and implementing a gamification strategy. Application examples.

### Recommended reading

1. Chang, A. Y. (2019). Playing Nature: Ecology in Videogames. University of Minnesota Press.
2. Cruz-Cunha, M. M., & Cruz-Cunha, I. (Eds.). (2021). Handbook of Research on Serious Games for Educational Applications. IGI Global.
3. Loh, C. S., Gualeni, S., & Deterding, S. (Eds.). (2018). Serious Games Analytics: Methodologies for Performance Measurement, Assessment, and Improvement. Springer
4. Moberg, A., & Ronneberger, K. (Eds.). (2019). Video Games as Culture: Considering the Role and Importance of Video Games in Contemporary Society. Routledge.
5. Rodrigues, L., Oliveira, A., & Rodrigues, H. (2022). Jogos Sérios: A Arte de Gamificar. Causa das Regras. ISBN 978-989-8754-92-9

### Teaching and learning methods

The teaching/learning process will be based on theoretical-practical lessons where the theoretical concepts are explained, using expositive and demonstrative methodologies, enabling the analysis and discussion of technological approaches in order to endow the student with analytical capabilities and skills needed to create prototypes or implement technological solutions to real problems.

### Assessment methods

- Final Evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
   - Practical Work - 50% (Application of the contents of chapters 1 and 2. (Minimum grade 7 values))
   - Practical Work - 50% (Application of the contents of chapters 3 and 4. (Minimum grade 7 values))

### Language of instruction

1. Portuguese
2. English

### Electronic validation

| Anabela Neves Alves de Pinho, Rita Carolina Morais da Costa | João Paulo Pereira de Sousa | Ines Monteiro Barbedo de Magalhaes | Luisa Margarida Barata Lopes |
|---|---|---|---|
| 01-03-2024 | 19-03-2024 | 19-03-2024 | 26-03-2024 |