INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Option II - Digital Educational Resources		Field of study	General Education	
Bachelor in	Basic Education		School	School of Education	
Academic Year	2022/2023	Year of study	2	Level	1-2	ECTS credits	3.0

Type	Semestral	Semester	1	Code	9853-531-2106-05-22

Workload (hours)	81	Contact hours	T	-	TP	27	PL	-	TC	-	S	-	E	-	OT	9	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)	Manuel Florindo Alves Meirinhos

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Understand the need to innovate through curricular integration of digital resources.
2. Develop multimedia educational activities.
3. Know the diversity of open source educational software.
4. Develop activities with emerging educational technologies.

Prerequisites

Not applicable

Course contents

Educational innovation and digital learning resources. Development of multimedia educational activities. Educational software open source. Emerging technologies and learning.

Course contents (extended version)

1. Educational innovation and digital learning resources.
    - DER and OER concept and classification
    - The diversity of digital educational resources.
    - Use versus integration of digital educational resources.
    - Levels of integration of digital resources.
    - Procedures for pedagogical innovation with digital educational resources.
2. Development of multimedia educational activities.
    - Authoring tools for the development of multimedia educational activities.
    - Development and customization of activities in Jclic.
    - Creating activities in online tools.
    - Edutainment.
3. Resources for promoting computational thinking
    - CODE. org
    - Scratch JR
    - Scratch
    - Educational Robots
4. Emerging technologies and learning.
    - Educational APPs.
    - QR codes and augmented reality.
    - Artificial intelligence resources

Recommended reading

1. Kukulska-Hulme, A. et al (2021). Innovating Pedagogy 2021: Open University Innovation Report 9. Milton Keynes: The Open University.
2. OCDE (2010). Inspirados pela tecnologia, norteados pela pedagogia. Uma abordagem sistémica das inovações educacionais de base tecnológica. Santa Catarina.
3. Llorente, C. , Roman, P. , & Romero, R. (2014). Tecnologías en los entornos de Infantil y Primaria. Madrid: Sintesis.
4. Cabero, J. & Barroso, J. (2013). Nuevos cenário digitales. Madrid: Pirámide.
5. Lata, M. , & Khatri, H. (2016). Educational Technology: Pedagogy and ICT Integration Across the Curriculum. Delhi: Shipra publications.

Teaching and learning methods

Whenever possible, the more theoretical aspects will be related to practical examples of the teaching experience. The discussion and joint reflection is also an important methodological practice. In more practical classes, students will use the computer, develop activities, evaluate educational software, and envision learning contexts to introduce emerging technologies.

Assessment methods

1. Continuous assessment. - (Regular, Student Worker) (Final)
    - Practical Work - 50% (Group work.)
    - Practical Work - 50% (Individual work)
2. Exame Assessment. - (Regular, Student Worker) (Supplementary, Special)
    - Final Written Exam - 100% (Pratical assessment.)

Language of instruction

Portuguese

Electronic validation

Manuel Florindo Alves Meirinhos	Maria Raquel Vaz Patrício	Maria Cristina do Espírito Santo Martins	Carlos Manuel Costa Teixeira
15-12-2022	15-12-2022	19-12-2022	02-01-2023