

Course Unit	Education and Multimedia Communication 2		Field of study	-	
Bachelor in	Environmental Education		School	School of Education	
Academic Year	2023/2024	Year of study	3	Level	1-3
Type	Semestral	Semester	1	ECTS credits	6.0
		Code		9082-768-3102-00-23	
Workload (hours)	162	Contact hours	T -	TP 27	PL 27
			TC -	S -	E -
			OT 18	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) Ana Claudia Loureiro, Manuel Florindo Alves Meirinhos

### Learning outcomes and competences

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

1. Using efficiencies with the different languages of communication as a way of designing multimedia messages efficient.
2. Using tools and software suited to the needs of multimedia design projects in the context of environmental education.
3. Planning adequately multimedia development projects in regional environmental issues.
4. Critically analyze the development and implementation of multimedia projects for environmental education in various stages of development.
5. To implement the projects of multimedia communication systems in the current information (network, DVD or CD) as its specific communicative, target audience and level of coverage that is sought.
6. Knowing the copyright related to electronic publications.

### Prerequisites

Before the course unit the learner is expected to be able to:  
None

### Course contents

Multimedia: concepts and characteristics. multimedia languages and their characteristics. Support design of multimedia products (image editing, audio editing, video editing). multimedia games and gamification. Design of interactive activities and learning in the digital world. Development of a multimedia project. Distribution of multimedia products. Use of e-learning platforms for multimedia broadcasting. Copyright and digital publishing.

### Course contents (extended version)

1. The Digital Multimedia Society
  - Characteristics of the digital society
  - The multimedia communication
  - Educational potentialities of multimedia communication
  - Multipoint synchronous communication tools
  - Online course creation platforms
  - MOOC and community creation platforms
2. Linguagens multimédia e suas características.
  - The Text.
  - The Image.
  - the Video.
  - The audio.
3. Support the design of multimedia products.
  - Image-processing tools (GIMP).
  - Video editing tools (of conversion tools and editing).
  - Designing panoramic tools.
  - Animation tools.
  - Sound tools.
  - Compression tools.
  - Conversion tools.
4. Multimedia games and gamification.
  - Gamification concept.
  - Gamification strategies and creating games.
5. Design of interactive activities and learning in the digital world.
  - Creation of multimedia activities with JClíc.
  - QR code and Augmented Reality.
  - Internet of Things and environmental education.
  - Virtual communities and MOOC for environmental education.
  - Panoramas and virtual tours
6. Development of a multimedia project.
  - Phases of the multimedia project.
  - Identification of a problem / issue.
  - Planning and design of the storyline.
  - Objectives.
  - Methodology.
  - Design.
  - Production.
  - Test and validation.
7. Distribution of multimedia products.
  - Global Citizenship
  - Global Digital Citizenship
  - Digital citizenship and sustainable technology
  - Promoting global citizenship in communities of learning and practice
8. Copyright and electronic publication.
  - National and international.
  - Patents and licenses.

### Recommended reading

1. Santos, J. , & Castriciano, A. (2012). Producción multimedia (videos y animaciones. Buenos Aires: Educar.
2. Burck, de Brian (2015). Gamificar: Como A Gamificação Motiva As Pessoas A Fazerem Coisas Extraordinárias. DVS editota, Brasil.
3. Aguaded, J. , & Cabero, J. (2013). Tecnologías y medios para la educacion en la e-sociedad. Madrid: Alianza Editorial.

Recommended reading

4. Ribeiro, N. (2012). Multimédia e tecnologias interactivas. Lisboa: FCA.  
5. Lopes, Z. (2013). Fotografia digital. Anaya multimedia, Espanha.

Teaching and learning methods

Lectures: Presentation of information and knowledge by the teacher. Theoretical-practical: It is intended to establish a more immediate connection between the theoretical knowledge and its application in practice. Laboratory classes: Direct contact with equipment and software in the multimedia lab. Guidance tutoring: Open horizons direct the work to be done (individually and in groups).

Assessment methods

1. Continuous evaluation. - (Regular, Student Worker) (Final)  
- Projects - 50% (Planning and implementation of a group project work.)  
- Portfolio - 50% (Individual development of a portfolio.)  
2. Exam evaluation. - (Regular, Student Worker) (Supplementary, Special)  
- Final Written Exam - 100% (Theoretical-practical exam. The work of the practical part can be considered.)

Language of instruction

Portuguese

Electronic validation			
Ana Claudia Loureiro, Manuel Florindo Alves Meirinhos	Maria Raquel Vaz Patrício	Adorinda Maria Rodrigues Pereira S. Gonçalves	Carlos Manuel Costa Teixeira
12-02-2024	13-02-2024	14-02-2024	18-02-2024