

<b>LEARNING BASED IN INTERACTIVE AND MULTIMEDIA MATERIALS (MASTED-02-03)</b>				
<b>DEGREE PROGRAM:</b>		Master in integrated STEAM Education (MASTED)		
<b>SEMESTER:</b>	<b>TYPE:</b>	<b>CREDITS:</b>	<b>WORKLOAD:</b>	<b>MENTORING:</b>
Second	Basic	7.5 ECTS	187.5 hours	2 hours/week
<b>LANGUAGE:</b> Portuguese/English friendly				

**OBJECTIVES**

<b>General</b>	Know and apply the various multimedia methodologies in learning accordingly to specific learning theories
<b>Specific</b>	<ul style="list-style-type: none"> <li>Distinguish multimedia, multimedia resources and multimedia methodologies.</li> <li>Design strategies and learning and contexts mediated by multimedia resources.</li> </ul>

**SUBJECT MATTER**

Designing learning environments that focus or are supported by interactive multimedia resources presupposes a knowledge of learning theories (and their assumptions). Similarly, knowledge of the main characteristics of the various multimedia methodologies enhances the use of multimedia resources by acting accordingly to specific learning theories. Particular reflecting on the use of digital resources for integrated approaches will be promoted.

**COMPETENCES**

- C2: Developing advanced cognitive and procedural skills associated with knowledge development and creation.
- C9: Integrating the theoretical knowledge acquired throughout the course with field practice.
- C11: Developing multilingual competence.
- C14: Developing advanced digital competences.
- C15: Developing digital pedagogy competences to use, plan and implement new technologies.
- C16: Developing of professional commitment using digital technologies.

**LEARNING OUTCOMES**

<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Knowledge and application of the various multimedia methodologies in learning.</li> <li>Knowledge of the assumptions of the main learning theories, applying them in the conception or use of a multimedia resource.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>Ability to use multimedia resources to address learners' diverse learning needs, by allowing learners to advance at different levels and speeds, and to follow individual learning pathways and objectives.</li> <li>Ability to use multimedia resources to foster learners' active and creative engagement with a subject matter.</li> <li>Ability to use multimedia resources within pedagogic strategies that foster learners' transversal skills, deep thinking and creative expression.</li> </ul>
<b>Attitudes/values</b>	<ul style="list-style-type: none"> <li>Disposition to reflect on, discuss, re-design and innovate pedagogic strategies for actively engaging learners.</li> </ul>

**TEACHING METHODS**

The classroom sessions will be used to systematize the acquired knowledge and skills, exercise the presented multimedia methodologies and reflection on the use of the methodologies in certain specific teaching-learning contexts. Although the original subject is in remote mode, MASTED students are going to have face-to-face classes.

Autonomously, the student is expected to study the suggested learning resources (video lessons and scientific articles) and do several activities regarding the exploration of multimedia resources and on the reflection on their use in the classroom according of the various learning theories. This reflection should be done with the peers, through the use of discussion forums.

Several multimedia resources will be presented and will be analysed throughout the semester.

**EVALUATION**

<p>In the evaluation of this UC it is applied the periodic assessment method. Elements of this assessment are:</p> <ul style="list-style-type: none"> <li>• Analysis of an objectivist multimedia resource (50%)</li> <li>• Analysis of a constructivist multimedia resource (50%)</li> </ul>	
<b>PRECONDITIONS</b>	
None	
<b>DEPARTMENT</b>	Escola Superior de Educação e Ciências Sociais
<b>LECTURERS</b>	Filipe Santos
<b>LITERATURE</b>	<ul style="list-style-type: none"> <li>• Mayer, R.E. (2019). Multimedia Learning (2nd Edition). Cambridge: Cambridge University Press.</li> <li>• Mayer, R. (Ed.) (2014). The Cambridge Handbook of Multimedia Learning (2nd Edition). Cambridge: Cambridge University Press.</li> <li>• Bower, M. (2017). Design of Technology-enhanced Learning: Integrating Research and Practice. Warrington, UK: Emerald Publishing Limited</li> <li>• Miranda, G. L. (Org.) (2009). Ensino Online e Aprendizagem Multimedia. Lisboa: Relógio d'Água Editores.</li> <li>• Jonassen, D. H. (2007). Computadores, Ferramentas Cognitivas: Desenvolver o pensamento crítico nas escolas. Porto: Porto Editora.</li> <li>• Lee, W., Owens, D. (2004). Multimedia-based Instructional Design: Computer-Based Training; Web-Based Training; Distance Broadcast Training; Performance-Based Solutions (Ed.). San Francisco, CA: Pfeiffer.</li> </ul>