

Course Unit	Didactics of the Study of the Environment		Field of study	Specific Didactics	
Master in	-		School	School of Education	
Academic Year	2023/2024	Year of study	1	Level	2-1
Type	Semestral	Semester	2	ECTS credits	6.0
Workload (hours)		162	Contact hours	T - TP 36 PL - TC - S - E - OT 18 O -	
Code: 5008-739-1204-00-23					

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) Cristina Maria Mesquita Gomes, Paulo Miguel Mafra Gonçalves

Learning outcomes and competences

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

1. Relate the importance of scientific culture in the formation of individuals and the role of education in science in the early years of schooling.
2. Discuss the importance of alternative conceptions in the formation of concepts.
3. Discuss contributions to the successful learning of the CTSA approach (science, technology, society and environment).
4. Justify different strategies as suggested activities for teaching practice of Environmental Studies.
5. Designing and implementing practical/experimental activities for Environmental Studies in basic education.
6. Evaluate the teaching and learning activities implemented in the context of the classroom.
7. Reflect on the role of assessment in the teaching-learning process of the 1st Cycle of Basic Education.
8. Analyse results of recent investigations within the 1st Cycle of Basic Education.

Prerequisites

Before the course unit the learner is expected to be able to:
It has no prerequisites.

Course contents

1. Fundamentals of learning in basic education - learning theories and teaching models; 2. Pedagogical practice and school success; 3. Assessment of students' learning - guiding principles of assessment.

Course contents (extended version)

1. Fundamentals of learning in basic education. Learning theories and teaching models:
 - Perspectives of teaching - From transmission To the research;
 - The movement of alternative conceptions - Assumptions and goals;
 - The alternative conceptions and the construction of concepts - Conceptual models of change;
 - The constructivist/social-constructivist paradigm of learning.
2. Pedagogical practice and school success:
 - Talk, design and realization of activities adapted to basic education;
 - Features of pedagogical practice the more favorable to the success of student.
3. Assessment of learning and assessment for learning - Regulatory principles of assessment:
 - Functions of evaluation - Methods and assessment tools;
 - Classification of the learning and development of assessment matrices.

Recommended reading

1. Fernandes, I. et al. (2017). Las relaciones entre Ciencia, Tecnología, Sociedad y Ambiente en los libros de texto de Educación Primaria. Revista Eureka Enseñanza y Divulgación de Ciencias 14(1) 54-68.
2. Harlen, W. (2006). Teaching, Learning and assessing science 5-12 (4ª ed). Sage Publications.
3. Pires, D. , & Martins, A. (2020). Aprendizagem Cooperativa: um contributo para o desenvolvimento competências cognitivas e sociais no E. B. In Membiela, Cebreiros e Vidal. Educação Editora.
4. Pires, D. et al. (2016). O ensino experimental como estratégia de abordagem das ciências. In Membiela, Casado e Cebreiros. Nuevos escenarios en la docencia universitaria. Educación Editora.
5. Silva, S. P. S. F. (2016). O Estudo do Meio: uma área integradora- Perspetivas de um grupo de profs. ISEC.

Teaching and learning methods

-Debate and discussion; -Critical reflection; -Group work; -Realization of practical/experimental activities adapted of 1º th cycle of basic education; -Design of assessment instruments adapted to basic education students.

Assessment methods

1. Continuous assessment. - (Regular, Student Worker) (Final)
 - Intermediate Written Test - 50% (Written test.)
 - Development Topics - 50% (Group work with individual discussion.)
2. Assessment by exam. - (Regular, Student Worker) (Supplementary, Special)
 - Final Written Exam - 50% (Final written exam on the contents of the written mid-term exam.)
 - Development Topics - 50% (Group work with individual discussion (frequency assessment).)

Language of instruction

Portuguese

Electronic validation

Cristina Maria Mesquita Gomes, Paulo Miguel Mafra Gonçalves	Orlando Miguel Pina Gonçalves Martins Gama	Pedro Alexandre Oliveira Couceiro	Carlos Manuel Costa Teixeira
14-02-2024	14-02-2024	21-02-2024	25-02-2024