

Course Unit	Pedology		Field of study	Earth Sciences	
Bachelor in	Agronomic Engineering		School	School of Agriculture	
Academic Year	2022/2023	Year of study	2	Level	1-2
Type	Semestral	Semester	1	ECTS credits	6.0
Code			9086-307-2104-00-22		
Workload (hours)	162	Contact hours	T	30	TP
			PL	30	TC
			S	-	E
			OT	20	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) Felícia Maria Silva Fonseca

Learning outcomes and competences

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

1. Identify the factors of soil formation
2. Identify the components and soil properties
3. Interpret soil maps in order to assess the main potential and limitations of the soil in a region
4. Recognize the importance of soil on ecosystems and on vegetation development
5. Developing the criticism capacity towards the decision-making within the soil conservation and the environment

Prerequisites

Before the course unit the learner is expected to be able to:
Basics of mathematics, physics, chemistry and biology.

Course contents

Genesis and soil development. Soil components: mineral matter, organic matter, pore volume. Physical and chemical soil properties: description and evaluation, relationship with soil components. Soil morphological properties: soil profile, characteristics of main horizons. Interpretation of soil maps. The soil as base of agriculture, forestry and agroforestry systems production.

Course contents (extended version)

Recommended reading

1. Agroconsultores e Caba 1991. Carta dos solos, do uso actual da terra e da aptidão da terra do nordeste de Portugal. UTAD/PDRITM, Vila Real.
2. Weil, R. and Brady, N. 2016. The nature and properties of soils. 15^a ed. , Pearson, New York.
3. Costa, J. B. 2004. Caracterização e constituição do solo. 7^a ed. FCG, Lisboa.
4. Porta, J. , López Acevedo, M. e Roquero, C. 2003. Edafologia para la agricultura y el medio ambiente. 3^a ed. , Ediciones Mundi-Prensa. Madrid.
5. Apontamentos elaborados, pela docente, especificamente para a unidade curricular Pedologia

Teaching and learning methods

Lecture classes are essentially expository. The practical classes in each block of matter have a brief expository period at the beginning, and the practical exercises are supervised. Tutorial support for students during semester, including exams period

Assessment methods

1. With practical component - (Regular, Student Worker) (Final, Supplementary, Special)
 - Practical Work - 42% (Corresponds to 2. 5 ECTS)
 - Final Written Exam - 58% (Corresponds to 3. 5 ECTS The exam includes only the theoretical component of the subject)
2. No practical component - (Regular, Student Worker) (Supplementary, Special)
 - Final Written Exam - 100% (Corresponds to 6. 0 ECTS. The exam includes theoretical and practical component of the subject)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Felícia Maria Silva Fonseca	Tomás de Aquino Freitas Rosa Figueiredo	Albino António Bento	Maria Sameiro Ferreira Patrício
06-12-2022	06-12-2022	09-12-2022	19-12-2022