Course Unit	Pedology			Field of study	Agrcultural and Animal Production		
Bachelor in	Agronomic Engineering			School	School of Agriculture		
Academic Year	2023/2024	Year of study	2	Level	1-2	ECTS credits	6.0
Type	Semestral	Semester	1	Code	9086-813-2104-00-23		

Workload (hours)	162	Contact hours	T -	TP -	PL -	TC -	S -	E -	OT -	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): Tomás de Aquino Freitas Rosa Figueiredo

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 Coba 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. 15ª ed. , Pearson, New York.
3. Costa, J. B. 2004. Caracterização e constituição do solo. 7ª ed. FCG, Lisboa.
4. Porta, J. , López Acevedo, M. e Roquero, C. 2003. Edafologia para la agricultura y el medio ambiente. 3ª 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 exame 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 exame includes theoretical and practical component of the subject)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Tomás de Aquino Freitas Rosa Figueiredo	Carlos Miguel De Sousa Silveira	Albino António Bento	Maria Sameiro Ferreira Patrício
22-01-2024	01-02-2024	01-02-2024	01-02-2024