

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
Type	Semestral	Semester	1	ECTS credits	6.0
Workload (hours)	162	Contact hours	T -	TP -	PL -
			TC -	S -	E -
			OT -	O -	
			Code 9086-813-2104-00-23		

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) 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 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

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