

Course Unit	Ecology and Management of Wildlife			Field of study	Environmental Sciences		
Bachelor in	Environmental Engineering			School	School of Agriculture		
Academic Year	2022/2023	Year of study	2	Level	1-2	ECTS credits 6.0	
Туре	Semestral	Semester	2	Code	9099-309-2201-00-22		
Workload (hours)	162	Contact hours	T 30 TP T - Lectures; TP - Lectures a	- PL 30 T	C - S - solving, project or laboratory; TC -	E - OT 20 O - Fieldwork; S - Seminar, E - Placement; OT - Tutorial; O - Other	

José Paulo Mendes Guerra Marques Cortez Name(s) of lecturer(s)

Learning outcomes and competences

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

- to know biology and ecology of terrestrial fauna
   to recognize characteristics of habitats and identify the importance of habitat structure on wildlife-habitat interactions
- a. assess wildlife species and wild populations dynamics using field and lab techniques
   a. Interpret information associated with collected population parameters, present diagnoses and management strategies
   b. understand the effects of disturbances on wildlife populations and on ecosystem dynamics and be able to develope action strategies for wild populations

## Prerequisites

Before the course unit the learner is expected to be able to: Biology

### Course contents

Ecology, fauna and ecosystem characteristics. Wildlife-habitat relationships. Habitat improvement techniques. Interactions among individuals and populations. Animal behaviour in natural and non-natural ecosystems. Wildlife management techniques. Effect of disturbances on wildlife. Ordinances and management principles for wild populations.

## Course contents (extended version)

#### 1. Ecology

- Basic concepts in ecology
   Organisms in terrestrial environments Conditions, resources and wildlife distribution
- Wildlife values
- Wildlife-habitat relationships
   Importance of habitat quality and resource availability for different kinds of fauna
   Habitat evaluation How to quantify an habitat
   Habitat analysis Food and Cover

  - Habitat selection
- Ecological succession and fauna
   Interactions between animals
  - Identification of animal species

  - Identification of alimital species
     European types of fauna
     Introduction to animal behaviour
     Migratory and dispersal movements in wildlife
     Wild vertebrates population dynamics
     Population structure Density Reproduction and mortality
     Denulation arouth models
  - Population growth models Metapopulation concepts

- Metapopulation concepts
   A. Carrying capacity
   Types of carrying capacity
   Disturbance effects on wildlife populations
   Fire and habitat fragmentation
   Disturbance frequence and wildlife populations
   Principles of wildlife management
   Atificial concepts
- Artificial control of animal abundance
   Wildlife exploitation

# Recommended reading

- Bailey JA. (1982). Principles of Wildlife Management. John Willey & Sons. New York
   Morrison ML, Marcot BG and Mannan, RW. (1992). Wildlife-Habitat Relationships. Concepts & Applications. The University of Wisconsin Press
   Sutherland, WJ and Hill, D. A. (Eds.). (1995). Managing Habitats for Conservation Cambridge University
   Silvy, N. J., & Wildlife Society. (2020). The wildlife techniques manual (8th ed.). Vol I e II. Johns Hopkins University Press
   Sinclair A, Fryxell J and Caughley G (Eds.). (2005). Wildlife Ecology, Conservation and Management. 2nd Ed. Blackwell Science Press

Teaching and learning methods

Lecture sessions with multimedia resources, tutorial classes and practice based on group works on field and lab.

## Assessment methods

- Alternative 1 (Regular, Student Worker) (Final, Supplementary)

   Final Written Exam 60%
   Intermediate Written Test 40%
   Alternative 2 (Regular, Student Worker) (Final, Supplementary)
   Alternative 3 (Student Worker) (Special)

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Language of instruction								
Portuguese, with additional English support for foreign students.								
Electronic validation								

José Paulo Mendes Guerra Marques Cortez	Amilcar António Teiga Teixeira	Artur Jorge de Jesus Gonçalves	Maria Sameiro Ferreira Patrício
21-12-2022	21-12-2022	22-12-2022	22-12-2022