

25252 - Zoology

Información del Plan Docente

Academic Year	2016/17
Academic center	201 - Escuela Politécnica Superior
Degree	571 - Degree in Environmental Sciences
ECTS	6.0
Course	1
Period	Second Four-month period
Subject Type	Basic Education
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

The learning of the subject is based on the following:

1. The theory lectures will consist in: participative theory lectures; videos; scientific articles discussion; discussion on some aspects of the subject and a specific seminar on Iberian sea invertebrates. Lectures will be in Spanish and scientific and part of the references in English.

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2. The practice lectures will have two parts. The first will be the elaboration of a collective report done by groups of three or four students on a given aspect of an Iberian species. The second will be dedicated to the learning in the identification of species in the field and in the lab. For this purpose magnifying glasses, microscopes, guides and collections will be used.

5.2.Learning activities

The program offered to the students to help them achieve the expected results, comprise the following activities:

On-site lectures

1. Theory lectures. 30 h. Teacher's presentations will be available on Moodle platform.
2. Lab practices. 14 h.
3. Field work. 10 h.
4. On-site evaluation. 6 h.

Non-classroom work

5. Collective work. 30 horas.
6. Study. 60 h.

Total: 150 h.

5.3.Program

Theory program

Chapter 1. Taxonomy and zoological nomenclature.

Chapter 2. Scientific and technical writing.

Chapter 3. Non Arthropoda invertebrates. Porifera, Cnidarians, Anelida, Mollusca, Chelicerate, Crustacea, Miriapoda and others.

Chapter 4. Arthropoda. Chelicerate, Crustacea and others; Hexapod (Insects).

Chapter 5. Systematics and Evolution of Vertebrates. Sub-disciplines.

Chapter 6. Iberian Fauna.

Chapter 7. Study methodology and inventories. Estimation of abundance. Ethology. Capture and marking. Foods, Habitat Use. Management and Conservation.

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Chapter 8. Relation with Man. Domestication, damages, impact, culture, use.

Practice program

Practice 1. Aquatic and soil Invertebrates: extraction, observation and taxa determination.

Practice 2 and 3: Extraction, observation and determination of taxa.

Practice 4. Fishes.

Practice 5. Amphibians and reptiles.

Practice 6. Birds.

Practice 7. Mammals.

Practice 8. Field work.

5.4.Planning and scheduling

Calendar of on-site lectures and report presentations

Calendar, timetable, tutorials and exams will be adjusted to the general academic calendar of Saragossa University and its Technical School.

The information on the subject will be available on Moodle platform from the beginning of the term.

Week 1. Subject presentation.

Week 2. Chapters 1 and 2.

Week 3. Chapter 3.

Week 4. Chapter 3.

Week 5. Chapter 3.

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Week 6. Chapter 4.

Week 7. Chapter 4.

Week 8. Chapter 5.

Week 9. Chapter 5.

Week 10. Chapter 5.

Week 11. Chapter 5.

Week 12. Chapter 6.

Week 13. Chapter 7.

Week 14. Chapter 8

5.5. Bibliography and recommended resources

Basic references

Brusca Richard C. 2003. Invertebrates (2ND ED.). Editorial Sinauer. ISBN 9780878930975

Comisión Internacional de Nomenclatura Zoológica 2000. Código internacional de Nomenclatura zoológica. Cuarta Edición. CSIC-ICZN.

Díaz M., Santos T. 1989. Zoología. Aproximación evolutiva a la Diversidad y Organización de los animales. Editorial Síntesis, Madrid.

Hickman C.P., Roberts L.S., Larson A., L'Anson H. y Eisenhour D. 2006. Principios integrales de Zoología. McGraw-Hill. Editorial Interamericana. 13ª edición.

Meglitsch, P.A. 1986. Zoología de los Invertebrados. Editorial Pirámide

Nores Quesada C. 2013. Manual para la Gestión de Poblaciones de Mamíferos. Instituto de Recursos Naturales y Ordenación del Territorio, Universidad de Oviedo.

Complementary references

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Margulis, L. & Schwartz, K.V. 1985. Cinco Reinos. Guía ilustrada de los Phyla de la vida en la Tierra. Editorial Labor.

Base datos Animales: <http://www.animalbase.org/>

Fauna europea: <http://www.faunaeur.org/>

Fauna Ibérica: <http://www.fauna-iberica.mncn.csic.es>

GBIF (Global Biodiversity Information Facility): <http://www.gbif.org/>

Species 2000: <http://www.sp2000.org/>

IUCN (International Union for the Conservation for Nature) <http://www.iucn.org/>

World Biodiversity Database

<http://www.nhbs.com/series/37533/world-biodiversity-database>

Reduca journal www.revistareduca.es

Bioimágenes <http://www.bioimagenes.com/>

Enciclopedia virtual de los vertebrados ibéricos

<http://www.vertebradosibericos.org/>