

**Información del Plan Docente**

<b>Academic Year</b>	2018/19
<b>Subject</b>	25252 - Zoology
<b>Faculty / School</b>	201 - Escuela Politécnica Superior
<b>Degree</b>	277 - Degree in Environmental Sciences 571 - Degree in Environmental Sciences
<b>ECTS</b>	6.0
<b>Year</b>	
<b>Semester</b>	Second Four-month period
<b>Subject Type</b>	Basic Education, Optional
<b>Module</b>	---

**1.General information****1.1.Aims of the course****1.2.Context and importance of this course in the degree****1.3.Recommendations to take this course****2.Learning goals****2.1.Competences****2.2.Learning goals****2.3.Importance of learning goals****3.Assessment (1st and 2nd call)****3.1.Assessment tasks (description of tasks, marking system and assessment criteria)****4.Methodology, learning tasks, syllabus and resources****4.1.Methodological overview**

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, laboratory sessions, fieldwork, assessment tasks, group work and autonomous work and study.

**4.2.Learning tasks**

This 6 ECTS (150 hours) course is organized as follows:

Face-to-face activities:

- **Lectures** (30 hours). Lectures will consist in: participative theory lectures, videos, scientific articles discussion and 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. Teacher's presentations will be available on Moodle platform.
- **Lab sessions** (14 hours). 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.
- **Fieldwork** (10 hours).
- **Exam** (6 hours).

Non face-to-face activities:

- **Group work** (30 hours).
- **Autonomous work and study** (60 hours).

#### 4.3.Syllabus

This course will address the following topics:

##### Lectures

- Topic 1. Taxonomy and zoological nomenclature.
- Topic 2. Scientific and technical writing.
- Topic 3. Non Arthropoda invertebrates. Porifera, Cnidarians, Anelida, Mollusca, Chelicerate, Crustacea, Miriapoda and others.
- Topic 4. Arthropoda. Chelicerate, Crustacea and others; Hexapod (Insects).
- Topic 5. Systematics and Evolution of Vertebrates. Sub-disciplines.
- Topic 6. Iberian Fauna.
- Topic 7. Study methodology and inventories. Estimation of abundance. Ethology. Capture and marking. Foods, Habitat Use. Management and Conservation.
- Topic 8. Relation with Man. Domestication, damages, impact, culture, use.

##### Practice sessions

- 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.

#### 4.4.Course planning and calendar

Calendar of face-to-face lectures and report presentations

- Week 1. Subject presentation.
- Week 2. Chapters 1 and 2.
- Week 3. Chapter 3.
- Week 4. Chapter 3.
- Week 5. Chapter 3.
- 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

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Sciences website and Moodle.

#### 4.5.Bibliography and recommended resources

BB	Brusca, Richard C.. Invertebrates / Richard C. Brusca, Werner R. D. H. Brusca, ... [et al.] ; ed. Sunderland (Massachusetts) : Sinauer Associates, cop. 1990.
BB	Código internacional de nomenclatura zoológica / Comisión Internacional de Nomenclatura Zoológica ; [traducción de la versión española, M.A. Alonso-Zarazaga] . 4a. ed. adoptada por la Unión Internacional de Ciencias Biológicas Madrid : The International Trust for Zoological Nomenclature [etc.], 2000.
BB	Díaz, José A.. Zoolología : aproximación evolutiva a la diversificación y organización de los animales / José A. Díaz, Tomás Santonja. Madrid : Síntesis, D.L. 1998
BB	Meglitsch, P.A. (1986). Zoolología de los invertebrados. Ed. Pirámide. AGOTADO
BB	Nores Quesada, C. (2013). Manual para la gestión de poblaciones de mamíferos. Instituto de Recursos Naturales y Ordenación del Territorio, Universidad de Oviedo
BB	Principios integrales de zoología / Cleveland P. Hickman, Jr., ... [et al.] . [ed. en español, traducida de la 13ª ed. en inglés de la 11ª ed.] Madrid : [etc.] : McGraw-Hill Interamericana, D. L. 2006
BC	Margulis, Lynn. Cinco reinos : guía ilustrada de los phyla de la vida en la Tierra / Lynn Margulis, Karlene V. Schwartz ; [traducción de Ana Avila] . 1a ed. Barcelona : Labor, 1985

#### URLs LIST:

Base datos Animales [ <a href="http://www.animalbase.org/">http://www.animalbase.org/</a> ]
Bioimágenes [ <a href="http://bioimagen.bioicm.es/">http://bioimagen.bioicm.es/</a> ]
Enciclopedia virtual de los vertebrados ibéricos [ <a href="http://vertebradosibericos.org/">http://vertebradosibericos.org/</a> ]
Fauna europea [ <a href="http://www.fauna-eu.org/">http://www.fauna-eu.org/</a> ]
Fauna ibérica [ <a href="http://www fauna-iberica.mncn.csic.es">http://www fauna-iberica.mncn.csic.es</a> ]
GBIF, Global Biodiversity Information Facility [ <a href="http://www.gbif.org/">http://www.gbif.org/</a> ]
Revista Reduca [ <a href="http://revistareduca.es/">http://revistareduca.es/</a> ]
Species 2000

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[<http://www.sp2000.org/>]

UICN, Unión Internacional para la Conservación de la Naturaleza y el Medio Ambiente

[<https://www.iucn.org/>]

World Biodiversity Database

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

The updated recommended bibliography can be consulted in:

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=10995>