



Universidad  
de Huelva

# Grado en CIENCIAS AMBIENTALES

Curso 2017/2018



## GRADO EN CIENCIAS AMBIENTALES

### DATOS DE LA ASIGNATURA

ASIGNATURA	CONSERVATION BIOLOGY	SUBJECT	CONSERVATION BIOLOGY
CÓDIGO	757709211		
MÓDULO	CONSERVACIÓN, PLANIFICACIÓN Y GESTIÓN DEL MEDIO RURAL Y URBANO	MATERIA	BIOLOGÍA DE LA CONSERVACIÓN
CURSO	3º	CUATRIMESTRE	1º
DEPARTAMENTO	CIENCIAS INTEGRADAS	ÁREA DE CONOCIMIENTO	ZOOLOGÍA
DEPARTAMENTO	CIENCIAS INTEGRADAS	ÁREA DE CONOCIMIENTO	BOTÁNICA
CARÁCTER	OBLIGATORIA	CAMPUS VIRTUAL	MOODLE

### DISTRIBUCIÓN DE CRÉDITOS

	TOTAL	TEÓRICOS GRUPO GRANDE	TEÓRICOS GRUPO REDUCIDO	PRÁCTICAS DE INFORMÁTICA	PRÁCTICAS DE LABORATORIO	PRÁCTICAS DE CAMPO
ECTS	6	2.52	1.48	0	0	2

### DATOS DEL PROFESORADO

#### COORDINADOR

NOMBRE JOSÉ PRENDA MARIN

DEPARTAMENTO CIENCIAS INTEGRADAS

ÁREA DE CONOCIMIENTO ZOOLOGÍA

UBICACIÓN EX P3 N4-15

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CAMPUS VIRTUAL MOODLE

### HORARIO DE TUTORÍAS

#### PRIMER SEMESTRE

LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
12:00 - 14:00	17:00 - 19:00	09:00 - 10:00 13:00 - 14:00		

#### SEGUNDO SEMESTRE

LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
17:00 - 19:00	12:00 - 14:00	17:00 - 19:00		

### OTROS DOCENTES

NOMBRE PABLO HIDALGO FERNANDEZ

DEPARTAMENTO CIENCIAS INTEGRADAS

ÁREA DE CONOCIMIENTO BOTÁNICA

UBICACIÓN DEPARTAMENTO CIENCIAS INTEGRADAS. FACULTAD EXPERIMENTALES



# Grado en CIENCIAS AMBIENTALES

Curso 2017/2018



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URL WEB

CAMPUS VIRTUAL

MOODLE

## HORARIO DE TUTORÍAS

### PRIMER SEMESTRE

LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
10:00 - 13:00			10:00 - 13:00	

### SEGUNDO SEMESTRE

LUNES	MARTES	MIÉRCOLES	JUEVES	VIERNES
	10:00 - 13:00	10:00 - 13:00		

## DESCRIPCIÓN GENERAL DE LA ASIGNATURA

### DESCRIPCIÓN GENERAL

Conservation Biology is the study of attempts to protect and preserve biodiversity. It focuses on both the biological and social factors that affect the success of conservation efforts and on determining ecosystems and species whose conservation is a high priority.

Under the influence of the biodiversity crisis, the discipline of Conservation Biology has developed into an important field of study, drawing material from all areas of biology and from law and management, and with its own conceptual and theoretical strengths. The aim of this subject is to provide students with a multidisciplinary education in Conservation Biology based on the core subjects of botany, zoology, ecology, genetics, etc., plus appropriate areas from mathematics and statistics, management and policy.

Conservation biology is an essential subject in the definition of the professional profile for the future Graduate in Environmental Sciences. In the first place, it is crucial to delimit scientifically the main problem that is the *raison d'être* of these professionals: the environmental crisis unleashed by the human being, responsible for the sixth extinction. Secondly, it contributes to the development of a sensitivity to this ecological crisis and to the adoption of positive attitudes toward its resolution. Third, it provides practical tools and basic theoretical foundations to address the main conservation problems, especially those from our nearest environment.

Due to its global and synthetic nature, Conservation Biology participates from the knowledge the student has got throughout the previous courses, such as Fauna, Botany, Ecology, Biology, Environmental Engineering, Environmental Law and Administration, Environment and Society, etc. With all them, it establishes links useful to consolidate the multidisciplinary formation of the future professional in order to face properly the environmental problems that cause real and deep impacts on biodiversity.

### ABSTRACT

Conservation Biology is the study of attempts to protect and preserve biodiversity. It focuses on both the biological and social factors that affect the success of conservation efforts and on determining ecosystems and species whose conservation is a high priority.

Under the influence of the biodiversity crisis, the discipline of Conservation Biology has developed into an important field of study, drawing material from all areas of biology and from law and management, and with its own conceptual and theoretical strengths. The aim of this subject is to provide students with a multidisciplinary education in Conservation Biology based on the core subjects of botany, zoology, ecology, genetics, etc., plus appropriate areas

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### OBJETIVOS: RESULTADOS DEL APRENDIZAJE

On completion of this course the successful learner will be able to:

- Demonstrate an understanding of the ecological and evolutionary principles that underlie biological diversity.
- Explain proximate and ultimate threats to biodiversity and the general consequences of biodiversity loss.
- Articulate the enormous responsibility humans have as global land stewards.
- Identify linkages among conservation problems across biological scales (genes to landscapes) and geographical scales (local to global).
- Demonstrate how ecological and evolutionary principles are applied to solving conservation problems.
- Apply critical reasoning skills to assessment, analysis, and synthesis of conservation problems and solutions.
- Demonstrate a greater understanding of conservation problems and cultural differences in perceptions of problems and appropriate solutions.

### REPERCUSIÓN EN EL PERFIL PROFESIONAL

This subject is essential to define the professional profile of the future Graduate in Environmental Sciences. In the first place, it is decisive to delimit scientifically the main problem that is the reason of being of these professionals: the environmental crisis carried out by man, responsible for the sixth mass extinction. Second, it contributes to the development of the sensitivity to this ecological crisis and to the adoption of positive attitudes towards the resolution of the problems. Third, it provides practical tools and basic theoretical foundations to address the main conservation problems of plants and animals, especially those in our immediate environment.

### RECOMENDACIONES AL ALUMNADO

This is a course for people who are interested in biodiversity and in protecting and restoring the natural environment. Students must have a range of skills from field and lab work to communication and research. To enroll in the program you must be studying a degree in Environmental Science, Biology or similar. People with a sound knowledge in ecology, evolution, zoology, botany (or equivalent) would be welcome.

English level: B2.

### COMPETENCIAS

#### COMPETENCIAS BÁSICAS

CB1 - Que los estudiantes hayan demostrado poseer y comprender conocimientos en un área de estudio que parte de la base

de la educación secundaria general, y se suele encontrar a un nivel que, si bien se apoya en libros de texto avanzados, incluye también algunos aspectos que implican conocimientos procedentes de la vanguardia de su campo de estudio.

CB2 - Que los estudiantes sepan aplicar sus conocimientos a su trabajo o vocación de una forma profesional y posean las competencias que suelen demostrarse por medio de la elaboración y defensa de argumentos y la resolución de problemas dentro de su área de estudio.

CB3 - Que los estudiantes tengan la capacidad de reunir e interpretar datos relevantes (normalmente dentro de su área de estudio) para emitir juicios que incluyan una reflexión sobre temas relevantes de índole social, científica o ética.

CB4 - Que los estudiantes puedan transmitir información, ideas, problemas y soluciones a un público tanto especializado como no especializado.

CB5 - Que los estudiantes hayan desarrollado aquellas habilidades de aprendizaje necesarias para emprender estudios posteriores con un alto grado de autonomía.

### COMPETENCIAS GENERALES

G3 - Comunicación oral y escrita.  
G6 - Capacidad de gestión de la información.  
G12 - Aprendizaje autónomo.  
G13 - Adaptación a nuevas situaciones.  
G14 - Razonamiento crítico.  
G18 - Sensibilidad hacia temas medioambientales.

### COMPETENCIAS TRANSVERSALES

CT1 - Que los estudiantes hayan desarrollado y demostrado poseer habilidades de aprendizaje y conocimientos procedentes de su campo de estudio, siendo capaces de aplicarlos en su trabajo, interpretando datos relevantes para emitir juicios de temas de diversa índole pudiendo transmitirlos a un público tanto especializado como no especializado.

### COMPETENCIAS ESPECÍFICAS

E19 - Capacidad en la elaboración e interpretación de cartografías temáticas.

## TEMARIO Y DESCRIPCIÓN DE LOS CONTENIDOS

### TEORÍA

1. WHAT IS CONSERVATION BIOLOGY? (3 h) (caps. 1-2 Tellería)
2. WHY DO SPECIES BECOME EXTINCT? (3 h) (caps. 3-4 Tellería)
3. MANAGEMENT UNITS (6 h) (caps. 5-9 & 15 Tellería)
4. CONSERVATION DIAGNOSTICS: BIODIVERSITY AND SPATIAL ASPECTS (3 h) (caps. 10-11 Tellería)
5. CONSERVATION DIAGNOSTICS: EXPLOITATION (1.5 h) (cap. 12 Tellería)
6. CONSERVATION DIAGNOSTICS: HABITAT (3 h) (caps. 13-14 Tellería)
7. GENERAL SOLUTIONS TO CONSERVATION PROBLEMS (5.5 h) (caps. 16-20 Tellería)

### PRÁCTICAS DE CAMPO

Country field trip 1: **Doñana** (24/11/17)

Country field trip 2: **Marismas del Odiel** (15/12/17)

In these outings, an on-site practice will be carried out, which must be delivered in writing by each student.

### METODOLOGÍA DOCENTE



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- Grupo grande
- Método expositivo (lección magistral).
  - Exposiciones audiovisuales.
  - Conferencias invitadas.
  - Realización de seminarios, talleres o debates.
  - Estudio de casos.
  - Resolución de ejercicios y problemas.
  - Realización de proyectos.
  - Ejercitar, ensayar y poner en práctica conocimientos previos y aplicar métodos propios de la disciplina.

- Grupo reducido
- Método expositivo (lección magistral).
  - Exposiciones audiovisuales.
  - Conferencias invitadas.
  - Realización de seminarios, talleres o debates.
  - Estudio de casos.
  - Resolución de ejercicios y problemas.
  - Realización de proyectos.
  - Ejercitar, ensayar y poner en práctica conocimientos previos y aplicar métodos propios de la disciplina.
  - Visitas a centros, instituciones, empresas u otros lugares de interés docente.

- Prácticas de campo
- Método expositivo (lección magistral).
  - Exposiciones audiovisuales.
  - Conferencias invitadas.
  - Realización de seminarios, talleres o debates.
  - Estudio de casos.
  - Resolución de ejercicios y problemas.
  - Realización de proyectos.
  - Ejercitar, ensayar y poner en práctica conocimientos previos y aplicar métodos propios de la disciplina.
  - Visitas a centros, instituciones, empresas u otros lugares de interés docente.
  - Aprendizaje autónomo.
  - Aprendizaje cooperativo.

## CRONOGRAMA ORIENTATIVO I

SEMANAS (S):	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15
GRUPO GRANDE	T1	T1	T2	T2	T3	T3	T3	T3	T4	T4	T5	T6	T6	T7	T7
GRUPO REDUCIDO	A1	A1	A1	A1	A1	A2	A2	A2	A2	A2	A3	A3	A3	A3	A3
PRÁCTICAS DE LABORATORIO															
PRÁCTICAS DE INFORMÁTICA															
PRÁCTICAS DE CAMPO									C1				C2		

## EVALUACIÓN DE LA ASIGNATURA

PRIMERA EVALUACIÓN ORDINARIA (FEBRERO/JUNIO)



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## EVALUACIÓN CONTINUA PORCENTAJE 30 %

It consists of the evaluation of the directed activities (50%) and field trips (50%) carried out during the course. This evaluation will involve up to 3 points in the final grade. To add these points, the student must have obtained at least a 4.0 in the final evaluation.

¿Existe opción alternativa a la evaluación continua arriba contemplada? NO

## EVALUACIÓN FINAL PORCENTAJE 70 %

	%
Readings (essay/questionnaire) + attendance on field trips + report/essay or practical -lab or field based- activities+ class attendance + active participation in class	<b>25</b>
Final exam	<b>75</b>

- Readings: Several papers will be uploaded to Moodle and the student should have to read them and answer specific questions made by the teacher.
- Field trips: attendance on both trips is essential for the full comprehension of this subject. Prior to the trips students will be required to read a report on both natural areas- the Doñana and Odiel marshes – and complete a question sheet in order to ensure they have the necessary background knowledge to achieve a better understanding of the trips. Field data collected during the excursions would be the base of some additional activities/essays.
- Attendance/participation: Students' performance in class is part of their work. Attendance will affect the participation grade. Students are expected to attend all sessions and participate actively during each class meeting. Simply coming to class is not enough.
- Final exam: This will consist of a 50 item, four option multiple-choice test + 5 short-answer/short essay questions based in all the information provided during the course, including readings and practical activities. In the multiple-choice test only one option is correct. Only the right answer receives a mark. A minimum of 4 points in the final exam are necessary to pass the course.

¿Contempla una evaluación parcial voluntaria? NO

## SEGUNDA EVALUACIÓN ORDINARIA (SEPTIEMBRE) Y OTRAS EVALUACIONES

The examination of the call of September and successive, will consist of the same sections as that of the first ordinary evaluation, with the same weighting.

## OTROS CRITERIOS DE EVALUACIÓN

¿Contempla la posibilidad de subir nota una vez realizadas las pruebas? NO

### Requisitos para la concesión de matrícula de honor

Se otorgará Matrícula de Honor a la mejor calificación del grupo, previo consenso del profesorado de la asignatura.

## REFERENCIAS

### BÁSICAS

**TELLERÍA J.L. 2012. Introducción a la conservación de las especies. Tundra Ediciones, Valencia**

### ESPECÍFICAS

DELIBES, M. 2001. Vida. La naturaleza en peligro. Temas de Hoy.

GASTON, K.J. & SPICER, J.I. 2004. Biodiversity. An Introduction. Blackwell Publishing, Oxford, UK.

GIBBS, J. P. M. L. HUNTER & E. J. STERLING. 2008. Problem-Solving in Conservation Biology and Wildlife Management, 2nd Edition. Wiley-



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Blackwell.

GROOM, M. J., MEFFE, G. K. & CARROLL, C. R. 2006. Principles of Conservation Biology. Sinauer. Associates Inc. USA.

HUNTER M.L. & GIBBS J.P. 2009. Fundamentals of Conservation Biology. Wiley-Blackwell; Cambridge; UK.

KAREIVA, P. & M. MARVIER. 2015. Conservation science: balancing the needs of people and nature. Roberts and Company.

MACDONALD D. W. & K. SERVICE. 2006. Key Topics in Conservation Biology. Blackwell Publishing Ltd, Oxford, UK.

SINCLAIR, A., FRYXELL, J. & CAUGHLEY, G. 2005. Wildlife Ecology, Conservation and Management. Blackwell Science. ISBN-10: 1405107375.

SODHI, N. S. & EHRLICH, P. R. 2010. Conservation Biology for All. Oxford University Press, Oxford.

VV.AA. 2004. Los retos ambientales del siglo XXI: la conservación de la biodiversidad en España. CSIC & Fundación BBVA. 346 páginas.