# UNIVERSIDAD DE CASTILLA - LA MANCHA

# GUÍA DOCENTE

## 1. General information

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|---|---|---|---|
| **Course:** | PLANNING AND MANAGEMENT OF PROTECTED NATURAL AREAS | **Code:** | 37334 |
| **Type:** | ELECTIVE | **ECTS credits:** | 4.5 |
| **Degree:** | 340 - UNDERGRADUATE DEGREE PROGRAMME IN ENVIRONMENTAL SCIENCES | **Academic year:** | 2021-22 |
| **Center:** | 501 - FACULTY OF ENVIRONMENTAL SCIENCES AND BIOCHEMISTRY | **Group(s):** | 40 |
| **Year:** | 4 | **Duration:** | First semester |
| **Main language:** | Spanish | **Second language:** | |
| **Use of additional languages:** | English | **English Friendly:** | Y |
| **Web site:** | | **Bilingual:** | N |

Lecturer: **FEDERICO FERNANDEZ GONZALEZ** - Group(s): **40**

| Building/Office | Department | Phone number | Email | Office hours |
|---|---|---|---|---|
| Edificio Sabatini, Despacho 0.24 | CIENCIAS AMBIENTALES | 925265753 | federico.fdez@uclm.es | Tuesday, Wednesday and Thursday from 1:00 p.m. to 3:00 p.m. Request appointment by e-mail for attendance at other time. |

## 2. Pre-Requisites

Not established

## 3. Justification in the curriculum, relation to other subjects and to the profession

Protected areas constitute a basic and classic tool in the strategies of *in situ* conservation of the natural heritage (biodiversity and geodiversity), that currently are being applied to more than 27% of the Spanish territories under different legal categories. The management of the protected areas and the socio-economic activities related to them are professional sectors offering relevant employment prospects for graduates in environmental sciences. This subject deepens in training on this strategy, whose basic elements were introduced in a previous subject on *Conservation Biology*. The specific aims are to present the theory on the conception, design, typology and legal regulations of the protected areas, and to analyze the criteria and instruments for their planning and management in the scientific framework of conservation biology and in the regional, national and European administrative spheres.

## 4. Degree competences achieved in this course

**Course competences**

| Code | Description |
|---|---|
| CB01 | Prove that they have acquired and understood knowledge in a subject area that derives from general secondary education and is appropriate to a level based on advanced course books, and includes updated and cutting-edge aspects of their field of knowledge. |
| CB02 | Apply their knowledge to their job or vocation in a professional manner and show that they have the competences to construct and justify arguments and solve problems within their subject area. |
| CB03 | Be able to gather and process relevant information (usually within their subject area) to give opinions, including reflections on relevant social, scientific or ethical issues. |
| CB04 | Transmit information, ideas, problems and solutions for both specialist and non-specialist audiences. |
| CB05 | Have developed the necessary learning abilities to carry on studying autonomously |
| CB06 | Students have developed the ability to work as a team and lead, direct, plan and supervise multidisciplinary teams |
| E01 | Ability to understand and apply basic knowledge. |
| E02 | Capacity for multidisciplinary consideration of an environmental problem |
| E03 | Awareness of the temporal and spatial dimensions of environmental processes |
| E04 | Ability to integrate experimental evidence found in field and/or laboratory studies with theoretical knowledge. |
| E05 | Capacity for qualitative data interpretation |
| E06 | Capacity for quantitative data interpretation |
| E07 | Capacity to plan, manage and conserve natural resources |
| E08 | Ability to value goods, services and natural resources economically |
| E09 | Capacity to analyze the exploitation of resources in the context of sustainable development |
| E13 | Ability to handle software. |
| E14 | Capacity to design and apply sustainability indicators |
| E18 | Capacity to manage the natural environment |
| E19 | Capacity to carry out integrated spatial planning and development |
| G01 | Proficiency in a second foreign language at level B1 of the Common European Framework of Reference for Languages. |
| G02 | Knowledge of Information and Communication Technologies (ICT). |
| G03 | Good oral and written communication |
| G04 | Ethical commitment and professional deontology |

## 5. Objectives or Learning Outcomes

**Course learning outcomes**

Description

Learn to critically value different opinions.

Design and implement the most appropriate management strategy according to known circumstances.

Ability to diagnose the state of a conservation objective and analyse the causes that determine it.

Ability to design and carry out monitoring in protected areas.
Capacity to intervene in the design of conservation programmes and implement measures to prevent the extinction of populations, species and habitats.
Capacity to intervene in the design of networks of protected areas.
Ability to participate in the development of natural resource management plans and protected area management plans.
Knowledge of the causes and dimensions of biodiversity loss.
Knowledge of the purposes and functions of protected natural areas within the framework of conservation strategies.
Collaborate and cooperate in multidisciplinary teams.
Management of conservation objectives and prioritization criteria.
Critically analyze the effects of different management proposals.
Maintain an attitude of learning and improvement throughout their studies and in their future professional life.
Organize your work and face any difficulties that may arise in an autonomous and creative way.
Knowledge of the legal system, planning instruments, characteristics and current status of the management of protected areas in Spain.

## 6. Units / Contents

**Unit 1: Introduction to Protected Areas**

**Unit 1.1** Concept of protected area, conservation targets and protection modalities, types of protected areas

**Unit 1.2** Criteria for prioritization of conservation targets applied to the design of protected areas

**Unit 1.3** Criteria for selection and design of protected areas

**Unit 2: Legislation on protected areas**

**Unit 2.1** European Directives: the Habitats Directive and the Natura 2000 Network

**Unit 2.2** Legislation on protected areas in Spain

**Unit 2.3** Legislation in Spanish Autonomous Communities: Castilla-La Mancha

**Unit 2.4** International conventions on protected areas

**Unit 2.5** Administration structure of a protected area: governing bodies, consultation and participation bodies

**Unit 3: Planning and management instruments in protected areas**

**Unit 3.1** Plans for natural resource management (PORN), Management Plans (PRUG), Sectorial and Special Plans

**Unit 3.2** Working on management plans: inventory, diagnostic, definition of management goals and measures. Zonification, public use, environmental education and research in protected areas

**Unit 4: The Spanish network of protected areas: protected areas in Castilla-La Mancha**

**Unit 5: Introduction to monitoring design in protected areas**

## 7. Activities, Units/Modules and Methodology

| Training Activity | Methodology | Related Competences (only degrees before RD 822/2021) | ECTS | Hours | As | Com | Description |
|---|---|---|---|---|---|---|---|
| Class Attendance (theory) [ON-SITE] | Lectures | CB01 CB02 CB03 CB04 CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E08 E09 E13 E14 E18 E19 G01 G02 G03 G04 | 0.68 | 17 | Y | N | Exposition of the units of the subject, whose presentations, bibliography, complementary readings and questions will be available for the student in the virtual platform. The active participation of the student in the theoretical classes is part of the continuous evaluation. |
| Class Attendance (practical) [ON-SITE] | Practical or hands-on activities | CB01 CB02 CB03 CB04 CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E13 E14 E18 E19 G01 G02 G03 G04 | 0.8 | 20 | Y | Y | Laboratory practices combining individual and team work. An analysis and review of the characteristics, planning and management status of several protected areas of Castilla-La Mancha will be developed, using pre-defined forms, and computer programs will be managed for the design and selection of protected areas based on complementarity analysis (Zonation), as well as for the evaluation of the impacts of climate change on the future distribution of conservation targets (Maxent). In-person attendance at practices is a compulsory and non-recoverable activity in order to pass the subject. Its evaluation will be carried out by means of the individual memory of practices, which is recoverable in both resit/retake exams. Active participation of the student in the practices will be considered within the continuous evaluation. The practices may be optionally complemented with work visits, in principle voluntary, to some protected areas in the region. |
| | | CB01 CB02 CB03 CB04 | | | | | One or two sessions for each theory topic will be devoted to the discussion on issues and cases |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Workshops or seminars [ON-SITE] | Case Studies | CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E08 E09 E13 E14 E18 E19 G01 G02 G03 G04 | 0.24 | 6 | Y | N | previously raised by the teacher, as well as to supervision of presentations on the voluntary course project. Active participation of the student in the seminars will be considered as part of the continuous evaluation. |
| Writing of reports or projects [OFF-SITE] | Guided or supervised work | CB01 CB02 CB03 CB04 CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E13 E14 E18 E19 G01 G02 G03 G04 | 0.8 | 20 | Y | N | Ellaboration of a voluntary team work, with individual distribution of tasks, consisting of applying the Green List certification standard for protected spaces proposed by the IUCN to a given protected space. This voluntary work is part of the continuous evaluation. The distribution of tasks and the time schedule for deliveries and presentations will be agreed in the third week of the course. |
| Practicum and practical activities report writing or preparation [OFF-SITE] | Guided or supervised work | CB01 CB02 CB03 CB04 CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E13 E14 E18 E19 G01 G02 G03 G04 | 0.7 | 17.5 | Y | Y | Preparation and delivery of the report on practices, presented individually from them information obtained through individual and team work, according to forms and schemes that will be provided at the beginning of the practice week. The presentation of this report is compulsory and recoverable in the resit/retake exams, and through it the practices of the subject will be evaluated. |
| Final test [ON-SITE] | Assessment tests | CB01 CB02 CB03 CB04 CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E08 E09 E13 E14 G03 G04 | 0.08 | 2 | Y | Y | Written test based on problem questions or cases, whose response requires linking arguments related to the different topics covered in the subject. The student can consult the printed or handwritten documentation that he brings with him to the test, which is compulsory and recoverable in the resit/retake exams. |
| Study and Exam Preparation [OFF-SITE] | Self-study | CB01 CB02 CB03 CB04 CB05 CB06 E01 E02 E03 E04 E05 E06 E07 E08 E09 E13 E14 E18 E19 G01 G02 G03 G04 | 1.2 | 30 | N | - | Autonomous work of the student: study of presentations and recommended bibliography, resolution of exercises and case studies, preparation of tests, etc. |
| | | **Total:** | **4.5** | **112.5** | | | |
| | | **Total credits of in-class work: 1.8** | | | | | **Total class time hours: 45** |
| | | **Total credits of out of class work: 2.7** | | | | | **Total hours of out of class work: 67.5** |

As: Assessable training activity
Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

## 8. Evaluation criteria and Grading System

| Evaluation System | Continuous assessment | Non-continuous evaluation* | Description |
|---|---|---|---|
| Assessment of active participation | 5.00% | 0.00% | Evaluation criteria: participation and initiative in the dynamics of the classes, seminars and lab practices; correction in the resolution of questions and cases in the seminars; clarity and ownership in the individual presentations and interventions in the debates; ethical commitment |
| Final test | 40.00% | 65.00% | Evaluation criteria: adequacy and originality of the argumentation and the reasoning of the answers; clarity, correctness and organization of the answers |
| Practicum and practical activities reports assessment | 30.00% | 35.00% | Evaluation criteria: adequacy of the reports to the corresponding scripts and forms; correction and clarity in the writing and presentation of the results obtained; teamwork coordination |
| Projects | 25.00% | 0.00% | Evaluation criteria: adequacy of the report structure to the established script; adequacy and completeness of the sources of information consulted; correction and relevancy of the references; precision and clarity of the writing; coordination within the working group |
| **Total:** | **100.00%** | **100.00%** | |

*According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).*

**Evaluation criteria for the final exam:**

**Continuous assessment:**

To pass the subject, it is necessary to obtain a score of at least 4 out of 10 in the final test, the supervised work and the practices report, and that the result of the weighting of the evaluation scores is a grade equal to or greater than 5 out of 10.

**Non-continuous evaluation:**

The weight of the practice report and the final test will be increased with that of the non-compulsory evaluations (active participation and voluntary projects) in case of no qualification of the latter. To pass the subject, it is necessary to obtain a score of at least 4 out of 10 in the final test and the practices report, and that the result of the weighting of the evaluation scores is a grade equal to or greater than 5 out of 10.

**Specifications for the resit/retake exam:**

Similar to those of the final exam. The qualification obtained in the practicum assessment may be retained during the following two academic years.

**Specifications for the second resit / retake exam:**

Similar to those of the resit/retake call.

## 9. Assignments, course calendar and important dates

| **Not related to the syllabus/contents** | |
|---|---|
| **Hours** | **hours** |
| Writing of reports or projects [AUTÓNOMA][Guided or supervised work] | 20 |
| Practicum and practical activities report writing or preparation [AUTÓNOMA][Guided or supervised work] | 17.5 |
| Final test [PRESENCIAL][Assessment tests] | 2 |
| Study and Exam Preparation [AUTÓNOMA][Self-study] | 30 |
| **Unit 1 (de 5): Introduction to Protected Areas** | |
| **Activities** | **Hours** |
| Class Attendance (theory) [PRESENCIAL][Lectures] | 4 |
| Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities] | 8 |
| Workshops or seminars [PRESENCIAL][Case Studies] | 1 |
| **Unit 2 (de 5): Legislation on protected areas** | |
| **Activities** | **Hours** |
| Class Attendance (theory) [PRESENCIAL][Lectures] | 4 |
| Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities] | 2 |
| Workshops or seminars [PRESENCIAL][Case Studies] | 1 |
| **Unit 3 (de 5): Planning and management instruments in protected areas** | |
| **Activities** | **Hours** |
| Class Attendance (theory) [PRESENCIAL][Lectures] | 4 |
| Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities] | 8 |
| Workshops or seminars [PRESENCIAL][Case Studies] | 2 |
| **Unit 4 (de 5): The Spanish network of protected areas: protected areas in Castilla-La Mancha** | |
| **Activities** | **Hours** |
| Class Attendance (theory) [PRESENCIAL][Lectures] | 2 |
| Workshops or seminars [PRESENCIAL][Case Studies] | 1 |
| **Unit 5 (de 5): Introduction to monitoring design in protected areas** | |
| **Activities** | **Hours** |
| Class Attendance (theory) [PRESENCIAL][Lectures] | 3 |
| Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities] | 2 |
| Workshops or seminars [PRESENCIAL][Case Studies] | 1 |
| **Global activity** | |
| **Activities** | **hours** |
| Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities] | 20 |
| Workshops or seminars [PRESENCIAL][Case Studies] | 6 |
| Practicum and practical activities report writing or preparation [AUTÓNOMA][Guided or supervised work] | 17.5 |
| Final test [PRESENCIAL][Assessment tests] | 2 |
| Study and Exam Preparation [AUTÓNOMA][Self-study] | 30 |
| Writing of reports or projects [AUTÓNOMA][Guided or supervised work] | 20 |
| Class Attendance (theory) [PRESENCIAL][Lectures] | 17 |
| **Total horas:** | 112.5 |

## 10. Bibliography and Sources

| Author(s) | Title/Link | Publishing house | Citv | ISBN | Year | Description |
|---|---|---|---|---|---|---|
| UNEP-WCMC | State of the world's protected areas: an annual review of global conservation progress | UNEP-WCMC | Cambridge | | 2008 | |
| | Información sobre las áreas protegidas de Castilla-La Mancha ¿ http://pagina.jccm.es/medioambiente/espacios_naturales/indexrapcm.htm | | | | | |
| | Web Revista Medio Ambiente en Castilla-La Mancha http://www.revistamedioambientejccm.es/inicio.php | | | | | |
| | Web de Europarc-España http://www.redeuroparc.org/que_es_europarc.jsp | | | | | Información y documentación sobre espacios protegidos en España |

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|---|---|---|---|---|---|
| | Web de la Agencia Ambiental Europea (EEA) http://www.eea.europa.eu/themes | | | | |
| | Web de la IUCN http://www.iucn.org/ | | | | |
| | Web de la World Database on Protected Areas (WDPA) http://www.wdpa.org/Default.aspx | | | | |
| | Web del Organismo Autónomo Parques Nacionales (OAPN) http://www.magrama.gob.es/es/parques-nacionales-oapn/default.aspx | | | | |
| | Web sobre conservación de la biodiversidad del Ministerio para la Transición Ecológica http://www.magrama.gob.es/es/biodiversidad/temas/default.aspx | | | | |
| Dudley N (Ed) | Guidelines for applying protected area management categories | IUCN | Gland (Switzerland) | 978-2-8317-1636-7 | 2013 |
| EUROPARC-España | Anuario 2016 del estado de las áreas protegidas en España | Fundación Fernando González Bernáldez | Madrid | | 2017 |
| EUROPARC-España | Diseño de planes de seguimiento en espacios naturales protegidos. Manual para gestores y técnicos | Fundación Fernando González Bernáldez | Madrid | | 2005 |
| Europarc-España | Planificar para gestionar los espacios naturales protegidos | Fundación Fernando González Bernáldez | Madrid | | 2008 |
| Europarc-España | Procedimiento de asignación de las categorías de manejo UICN a los espacios naturales protegidos | Fundación Fernando González Bernáldez | Madrid | | 2008 |
| Fernández-González F., Pérez Badia M.R., Sardinero S., Rodríguez Torres A. & Crespo G. | Espacios naturales protegidos y cambio climático en Castilla-La Mancha | Fundación General de Medio Ambiente de Castilla-La Mancha | Toledo | | 2009 |
| García Fernández-Velilla S. | Guía metodológica para la elaboración de los planes de gestión de los lugares Natura 2000 en Navarra | Gestión Ambiental, Viveros y Repoblaciones de Navarra S.A. | Pamplona | | 2003 |
| Mulero Mendigorri A. | La protección de espacios naturales en España | Mundi-Prensa | | | 2002 |
| Ruiz R. & Serrano C. (Eds) | La Red Natura 2000 en Castilla-La Mancha | Junta de Comunidades de Castilla-La Mancha | Toledo | | 2009 |
| | Información sobre la Red Natura 2000 en Castilla-La Mancha www.castillalamancha.es/gobierno/desarrollosostenible/estructura/dgapfyen/actuaciones/red-natura-2000tramitaci%C3%B3n-de-planes-de-gesti%C3%B3n-y-declaraci%C3%B3n-de-zec | | | | |
| IUCN | IUCN Green List of Protected and Conserved Areas: Standard, Version 1.1. The global standard for protected areas in the 21st Century | IUCN | Gland, Suiza | | 2017 |
| Worboys G.L., Lockwood M., Kothari A., Feary S. & Pulsford I. | Gobernanza y gestión de áreas protegidas | Universidad El Bosque & ANU Press | Bogotá | 978-958-739-133-6 | 2019 |
| | Web europea sobre la Red Natura 2000 europa.eu.int/comm/environment/nature | | | | |
| UNEP-WCMC, IUCN & NGS | Protected Planet Report 2018 | UNEP-WCMC, IUCN & NGS | Cambridge UK; Gland, Switzerland; and Washington, D.C., USA | 978-92-807-3721-9 | 2018 |