

**COURSE DATA****Data Subject**

<b>Code</b>	33105
<b>Name</b>	Environmental interpretation and education
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2022 - 2023

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1104 - Degree in Environmental Sciences	Faculty of Biological Sciences	4	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1104 - Degree in Environmental Sciences	167 - Environmental education and interpretation	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
GARCIA FERRANDIS, IGNACIO	90 - Methodology of experimental and social sciences
MAYORAL GARCIA-BERLANGA, OLGA	90 - Methodology of experimental and social sciences

**SUMMARY**

Environmental Education goes beyond knowledge of environmental problems, as it aims to develop attitudes and values of respect towards the environment and to assume responsibilities that lead the individual towards everyday actions, both as professionals and as consumers.

This subject therefore aims to provide students with a systemic vision of the environmental problems caused by human activity, but also to apply methodologies and strategies through which students can develop attitudes that encourage environmentally friendly behaviour.

For their professional training, the aim is to enable students to investigate and develop educational projects and activities, both formal and non-formal.



In the non-formal sphere, there are possibilities in the performance of educational actions aimed at encouraging citizen participation in some environmental management instruments such as Local Agenda 21, which has opened up new possibilities for graduates in Environmental Sciences to act. In the formal sphere, possible actions focus on the educational system as possible teachers of secondary and baccalaureate.

## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

Those required in the previous courses of the degree.

## COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

### 1104 - Degree in Environmental Sciences

- Be able to communicate orally and in writing.
- Be able to work in a team.
- Be able to design and implement environmental awareness and communication programmes.
- Capacidad de organizar y planificar el trabajo individual, grupal y el estudio.
- Capacidad de comunicación oral en las exposiciones públicas y de argumentación de opiniones personales.
- Capacidad de tratamiento divulgativo de las informaciones sobre ciencia ambiental.
- Compromiso ético en el ejercicio de la profesión de ambientólogo.
- Valorar la importancia que puede tener la educación y los procesos de comunicación como vía para controlar y minimizar la problemática ambiental a la que se enfrenta la sociedad actual, y conocer sus limitaciones.
- Conocimientos básicos sobre los planteamientos y enfoques de la educación ambiental y dominio de la terminología específica.
- Conocer y saber aplicar las diversas técnicas de comunicación, interpretación y educación ambiental.
- Conocer y saber utilizar las diferentes fuentes de información y documentación especializada en educación ambiental disponible en todos los ámbitos.
- Capacidad de diseño, planificación y aplicación de diferentes tipos de programas de intervención educativa para la sensibilización ambiental de distintos tipos de públicos.



- Conocimiento y capacidad de aplicación de técnicas y estrategias para hacer más efectiva la comunicación y divulgación de contenidos científicos sobre temas ambientales.
- Capacidad de reflexión y evaluación formativa de actividades, recursos, campañas y programas de educación ambiental.

## **LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)**

- Experience in how to incorporate education in environmental management processes.
- Search for documentation and bibliography related to environmental education.
- Design of instruments for researching previous ideas, attitudes and behaviours related to the environment: questionnaires, concept maps, interviews, etc.
- Design of a research project in environmental education.

## **DESCRIPTION OF CONTENTS**

### **1. INTRODUCTION**

- Action of the human being on the environment.
- The systemic vision and systematization of environmental problems.
- Origin, causes and solutions from an administrative, political, technical and individual perspective
- EA as a response to the environmental crisis. Ecology, environmental problems and environmental education.
- Individual responsibility and involvement in environmental problems.
- Responsible consumption Policy areas.
- Formal, non-formal and informal education.

### **2. ENVIRONMENTAL EDUCATION**

- Environmental education in sustainable development.
- Justification, background and evolution of the E.A. Aims and objectives of the EA.
- Professional profile of environmental educator.
- Levels of action in education-interpretation and environmental communication.
- Evaluation and research in EA.
- Documentary sources and resources for the EA.
- Equipment for the EA.
- EA in the education system.
- Design of programs and didactic units of EA.



### **3. DIDACTIC STRATEGIES**

- EA in environmental management.
- Local Agenda 21.
- Strategies and methodologies for educational intervention
- Education in environmental values.
- Environmental education programmes and projects.
- Research in Environmental Education

### **4. ENVIRONMENTAL OUTREACH AND COMMUNICATION**

- Scientific and environmental dissemination through the media.
- Treatment of environmental information in audiovisual media.
- Analysis and design of publicity campaigns for environmental awareness.
- Environmental dissemination in museums and other exhibition centres.

### **5. INTERPRETATION OF HERITAGE**

- Interpretation of natural and cultural heritage.
- Planning of programs and interpretive plans for natural spaces.
- Design of itineraries and field tours.
- Design of interpretive panels.
- Public use in protected natural areas.

### **6. PUBLIC PARTICIPATION**

- The social role of citizen participation.
- Participation and environmental volunteering.
- Typology and levels of participation.
- Regulatory framework for environmental participation.
- Design of environmental participation programs.
- Social research techniques applied to environmental participation programmes.
- Case studies: Agendas 21; river basins; PORNs.

### **7. PROJECT DEVELOPMENT**

- Projects and teaching units in the formal field.
- Educational intervention in environmental management processes (local Agenda 21, water framework directive, PORN,...).
- Heritage interpretation programmes.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	36,00	100
Laboratory practices	9,00	100
Computer classroom practice	6,00	100
Classroom practices	6,00	100
Tutorials	3,00	100
Attendance at events and external activities	5,00	0
Development of group work	10,00	0
Development of individual work	5,00	0
Study and independent work	10,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	20,00	0
Preparing lectures	10,00	0
Preparation of practical classes and problem	10,00	0
Resolution of case studies	10,00	0
Resolution of online questionnaires	5,00	0
<b>TOTAL</b>	<b>150,00</b>	

**TEACHING METHODOLOGY**

The teaching-learning process will try to raise in the students the motivation and attitudes necessary for an effective learning of the subject, while offering them the necessary skills for it. Various methodological techniques can be used, which will be used in the following training activities:

**Face-to-face sessions:**

- Theoretical-practical classes in which the teacher participates with the whole class and in which both the teacher's contributions and those of the groups of students are developed. They are aimed at presenting the basic information on the contents of this subject, through various types of activities that require the active participation of students.
- Practical classes in which students can acquire new knowledge, learn working techniques and develop certain skills and abilities.
- Tutorials for students or groups of students in which the teacher will guide and supervise the tasks assigned to them and attend to their needs. These may be complemented by the use of the virtual classroom.
- Outdoor activities (visits to museums, field trips, etc.) in which the resources offered by the environment will be used for the teaching-learning of the contents of the subject. Whenever possible, these sessions will be scheduled appropriately if they require the use of unusual times or spaces or the collaboration of other specialists.

**Non-face-to-face sessions:**

- With the aim of helping students to complement their training in what they have been doing in the face-to-face sessions, the teacher will provide guidance and advice on the learning materials that he/she considers useful for this purpose. Students will also have to carry out bibliographical research, group work, use of the virtual classroom, etc., which they need for their training.

**EVALUATION**

Formative and summative evaluation that enables the assessment of the progress that is being made and the objectives that are being achieved throughout the course, using various techniques and taking into account aspects such as:

- The attendance and participation of each student in the usual tasks of the classes (classroom, laboratory, tutorials...), their attitude towards the subject and their capacity for individual and/or group work.
- The elaboration of materials or work (individually or collectively) when they have been assigned to do so. In some situations, these materials or assignments may be presented and discussed in class.
- The acquisition of the competences (knowledge, procedures, skills...) specified in this guide that can and must be assessed.

In order to apply for an advanced sitting or examination of this subject, students must take into account that they must have completed the compulsory activities specified in the subject's teaching guide.

**REFERENCES****Basic**

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- Heras. F. (2002) Entretantos. Guía práctica para dinamizar procesos participativos sobre problemas ambientales y sostenibilidad. Gea. Valladolid.
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- Kramer, F. Manual práctico de educación ambiental: técnicas de simulación, juegos y otros métodos educativos. Madrid: Catarata, 2002.



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- Melendro, M., Murga, M. A., Cano, A. (coords). IDEAS : Iniciativas de educación ambiental para la sostenibilidad. Madrid: Universidad Nacional de Educación a Distancia, 2011.
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