VNIVERSITAT DE VALÈNCIA

Course Guide
35005 Integrated Analysis of the Environment

COURSE DATA

DATA SUBJECT

Code: 35005
Name: Integrated Analysis of the Environment
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2026-27

STUDY (S)

Degree	Center	Acad. year	Period
1318 - Degree in Geography and the Environment	Facultat de Geografia i Història	3	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1318 - Degree in Geography and the Environment	Integrated study of the natural environment	COMPULSORY

COORDINATION

PORTUGUES MOLLA IVAN

SUMMARY

The natural environment is not simply the sum of a series of components: geology, relief, modelling, climate, water, biosphere... In it occur a series of interaction processes of these elements that the student should know, for the purposes of recognition and understanding of the environment: as the geological background which is the base for the formation and evolution of the relief and as substrate in which are housed other environmental components, biological and climatic factors in modeling processes, the relationship between the geology the hydrology and hydrology, the natural bases of the landscape, etc.

But in addition, the natural environment can be considered as the space in which the man carries out its activities. The interactions between man and natural environment are multiple, and work in a double sense, both in the adaptation of man to the medium as his intervention to transform it. This course is based on the knowledge obtained by the student in previous physical geography subjects, such as geomorphology, climatology, hydrology, and biogeography. Its main objective is to focus on relationships of all these components of the natural environment and do so using concrete examples of the nearby students' environment.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

The student must have completed courses on geomorphology I and II, climatology, hydrology, and biogeography

COMPETENCES / LEARNING OUTCOMES

1318 - Degree in Geography and the Environment

Analyse and value landscapes from a spatial-temporal perspective.

Be able to learn independently and show creativity, initiative and entrepreneurship. Be able to resolve unforeseen situations.

Be able to relate the natural environment and the social and human spheres.

Be able to work independently.

Be able to work in interdisciplinary teams.

Have capacity for analysis and synthesis.

Learn about methodology and fieldwork.

Learn basic techniques for fieldwork in geography and particularly for reading and interpreting the landscape in geographic terms.

Show motivation for quality, responsibility and intellectual honesty.

DESCRIPTION OF CONTENTS

1. THE NATURAL ENVIRONMENT AS AN INTEGRATION OF FACTORS

This is an introductory unit which presents the natural environment as an integration of different factors, which until the moment have been studied separately, but now need to be integrated at different levels.

2. BASIC FACTORS OF INTEGRATION I: GEOLOGY

This second topic deals with the importance of geology as one of the main components of environment. Structural features of the terrain (such as tectonic and lithology) are analyzed, in relation to the present natural environment

3. BASIC FACTORS OF INTEGRATION II: CLIMATE AND WATER

This topic addresses the climate as a main factor to degrade the original landforms. Also, in relation to climate and water cycle, it studies the river systems as one of the main erosion factors in our environment. It also focusses the importance of water as integrator of natural environment components.

4. INTEGRATION OF HYDROGEOMORPHOLOGICAL FACTORS FROM CASE STUDIES

This topic presents a first level of aggregation between the basic factors of geology, climate and water. Landforms and relief are the main result of this integration.

5. INTEGRATION OF LANDSCAPES AND ANTHROPIC ACTION FROM CASE STUDIES

This unit is a second level of aggregation which includes biotic elements. It covers the major land landscapes in relation to the substrate, climate and soils. The concept of environmental unit and its typologies are presented.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Other activities	15,00
Classroom practices	15,00

Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	15,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	40,00
Preparation for assessment activities	15,00
Resolution of case studies	20,00
Total hours	**90,00**

TEACHING METHODOLOGY

FACE-TO-FACE CLASSES:

The explanations of the theoretical classes will be supported by a bibliographic dossier. The active participation of the student is required, which is why continuous attendance at theoretical and practical classes, as well as field trips, is highly recommended.

A) Theoretical classes:

Approximately 1/3 of the face-to-face classes will be dedicated to them. They will focus on:

- General approach to the integrated analysis of the natural environment.

- Selection of fundamental concepts for the analysis and understanding of the natural environment in the Mediterranean area.

B) Practical classes:

Approximately 2/3 of the face-to-face classes will be dedicated to them. They will focus on:

- Presentation of materials and sources for the integrated analysis of the natural environment.

- Practical thematic exercises of presentation and analysis of an element of the physical environment, and its role as a component and/or factor.

- Practical exercises on the relationship between two or more components of the natural environment.

COMPLEMENTARY ACTIVITIES

The complementary activities will consist of:

A) Seminar on preparation for field practices.

B) Field practices: one or more field trips will be carried out, the main objective of which will be:

- Observe, analyse and understand in the field some of the aspects covered in face-to-face classes.
- Collect the necessary information to prepare field reports that accompany the basic documentation in an analysis of the natural environment.

C) Other complementary activities:

Throughout the course, several complementary activities can be carried out aimed at consolidating the knowledge of the subject: viewing scientific documentaries, visits to centres of interest, visits to exhibitions related to the subject, etc.

EVALUATION

On the date set by the Faculty, a theoretical-practical exam will be held. The evaluation of the subject will be obtained from:

- Theoretical and practical exam: 40%.

- Assessment of internships and supervised work: 50%.

- Complementary activities: 10%

Assessment conditions:

- The delivery of the practical exercises is compulsory, according to the teacher's specifications. The practical exercises are part of the continuous assessment system.

At least a grade of 4 out of 10 must be obtained in the theoretical-practical exam to be able to take the

average with the practical block.

The second call will evaluate the theoretical and practical criteria of the subject in the same way as in the first call.

REFERENCES

Basic
- Costa, M. (1982): Pisos bioclimáticos y series de vegetación en el área valenciana. Cuadernos de Geografía, nº 31, pp.129-142
- De Dios Centeno, J., Fraile, M.J., Otero, M.A. y Pividal, A.J. 1994. Geomorfología práctica: ejercicios de fotointerpretación y planificación geoambiental. Madrid: Rueda.
- MINISTERIO DE MEDIO AMBIENTE (1998): Libro Blanco del Agua en España. 853p. Disponible en:
- Martínez Álvarez, J.A. 1991. Mapas geológicos: explicación e interpretación. Madrid: Paraninfo.
- Mulas, J. y Morillo-Velarde, M.J. (1997) Geología, COU Santillana, 399pp.
- Pérez Cueva, A.J. (1994): Atlas climático de la Comunidad Valenciana
- Strahler, A. y Strahler, A. (2003): Introducing Physical Geography, Wiley and Sons, 684 p.
- Ward, A.D. y Trimble, S.W. (2004): Environmental Hydrology, 2 edn., Lewis Publishers, BocaRaton Florida, 475p.

Additional
- AGUILERA, M.J.; BORDERÍAS, P.; GONZÁLEZ, P. y SANTOS, J.M. (1990): Ejercicios prácticos de Geografía Física, Universidad Nacional de Educación a Distancia, 676 p.
- CUSTODIO, E. y LLAMAS, R. (1996): Hidrología subterránea. Ed. Omega, 1157 pp
- Gutiérrez Elorza, M. 2008. Geomorfología. Pearson. 898 pp.
- De Pedraza Gilsanz, J. 1996. Geomorfología. Principios, métodos y aplicaciones. Madrid: Rueda.
- Guerra-Merchán, A. 1994. Mapas y cortes geológicos. Interpretación y resolución de problemas geológicos. Colección CEP. Malaga: Ciencia y Técnica
- MATEU, J. (1993): Hidrología, Geografía General I. Introducción a la Geografía Física, Bielza de Ory Ed., Taurus Universitaria, pp.250-294.
- Tejada, G. 1994. Vocabulario geomorfológico. Madrid: Akal.
- VV.AA. (1988): Guía de la naturaleza de la Comunidad Valenciana. Edicions Alfons el Magnànim, Generalitat Valenciana, 622pp.
- VV.AA. (2010): Biogeografía. Una ciencia para la conservación del medio. Universidad de Alicante, 510, p.