

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

Code	35005
Name	Integrated Analysis of the Environment
Cycle	Grade
ECTS Credits	6.0
Academic year	2018 - 2019

Study (s)

Degree	Center	Acad. year	Period
1318 - Degree in Geography and the Environment	Faculty of Geography and History	3	Second term

Subject-matter

Degree	Subject-matter	Character
1318 - Degree in Geography and the Environment	600 - Integrated study of the natural environment	Obligatory

Coordination

Name	Department
PASCUAL AGUILAR, JUAN ANTONIO	195 - Geography

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

OUTCOMES

1318 - Degree in Geography and the Environment

- Have capacity for analysis and synthesis.
- Be able to work independently.
- Be able to work in interdisciplinary teams.
- Be able to learn independently and show creativity, initiative and entrepreneurship. Be able to resolve unforeseen situations.
- Show motivation for quality, responsibility and intellectual honesty.
- Learn about methodology and fieldwork.
- Be able to relate the natural environment and the social and human spheres.
- Analyse and value landscapes from a spatial-temporal perspective.
- Learn basic techniques for fieldwork in geography and particularly for reading and interpreting the landscape in geographic terms.

LEARNING OUTCOMES

- Learning results are essentially summarized in:
- To give the student an integrated view of the components of the natural environment: geology, relief, climate, geomorphology, shaped structures, hydrology and biogeography
- To select useful concepts to understand and describe the processes and forms that make up the Valencian and Iberian physical environment
- To understand the relationships between geology and climate in the surface and underground hydrological cycles
- To understand the integration of the geodynamic internal and external processes in the formation of the relief



- To understand the integrating factors and biotic processes in the formation of plant the landscapes

To recognize and integrate the human action as a factor of the natural processes that make up the physical environment

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.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	30,00	100
Other activities	15,00	100
Classroom practices	15,00	100
Attendance at events and external activities	15,00	0
Preparation of evaluation activities	15,00	0
Preparing lectures	15,00	0
Preparation of practical classes and problem	25,00	0
Resolution of case studies	20,00	0
TOTAL	150,00	

TEACHING METHODOLOGY**CLASSES:**

The theoretical explanations will be supported with a bibliographical dossier. It requires an active participation of the student, so it is highly recommended the continued assistance to the theoretical and practical classes, as well as the field trips

A) Theoretical classes:

It will be dedicated to theoretical classes about 1/3 of the classroom tyme. They will focus on:

- the general approach of the integrated analysis of the natural environment
- selection of fundamental concepts for the analysis and understanding of the natural environment in the Mediterranean world

B) Practical classes:

About 2/3 of the classron tyme will b dedicated to practical clases. They will focus on:

- Presentation of materials and sources for the integrated analysis of the natural environment - Practical exercises with presentation and analysis of an element of the physical environment, and its role as component or factor.
- Practical exercises of relationship between two or more components of the natural environment



COMPLEMENTARY ACTIVITIES AND FIELD PRACTICES:

A) Field practices:

There will be one or more field trips, whose main purpose will be:

- To observe, analyze and understand in the field some of the aspects dealt with in the classroom.
- To collect the necessary information to develop field reports that accompany the basic documentation on an analysis of the natural environment.

B) Other complementary activities:

-Along the course various activities will be carried out aimed to consolidate the knowledge of the subject: viewing of scientific documentaries, visits to centres of interest, visits to exhibitions related to the subject, etc.

EVALUATION

There will be a theoretical and practical exam of the course on the date set by the Faculty. The evaluation of the course will be held according to:

- Theoretical exam: 60%.
- Practical exam and work: 30%.
- Complementary activities: 10%

Conditions of evaluation:

- To carry out the examination of practices it will be a necessary condition having previously submitted the booklet of practices developed during the course, according to specifications of the teacher.

To make an overall average course score it will be necessary to obtain at least a mark of 4 in the theoretical part.

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: <http://hercules.cedex.es/Informes/Planificacion/2000-Libro_Blanco_del_Agua_en_Espana/>
- 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.