



Year : 2018/19

66713 - Environmental planning field techniques and case solving

Syllabus Information

Academic Year:	2018/19
Subject:	66713 - Environmental planning field techniques and case solving
Faculty / School:	103 -
Degree:	328 - Master's in Land and Environmental Planning
ECTS:	6.0
Year:	1
Semester:	Annual
Subject Type:	Optional
Module:	---

General information

Aims of the course

Context and importance of this course in the degree

Recommendations to take this course

Learning goals

Competences

Learning goals

Importance of learning goals

Assessment (1st and 2nd call)

Assessment tasks (description of tasks, marking system and assessment criteria)

Methodology, learning tasks, syllabus and resources

Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as participative sessions, practical exercises, individual or group activities, guided activities, field work and autonomous work.

Students are expected to participate actively in the class throughout the course.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials, including a discussion forum.

Learning tasks

The course includes the following learning tasks:

- Lectures: 10 hours
- Practical, interactive, individual or group activities: 10 hours
- Guided activities: 10 hours
- Field work: 30 hours

Syllabus

The course will address the following topics:

Introduction: presentation of the course

Topic 1. Field techniques for the analysis of hydro-geomorphological processes in semiarid areas and the natural environment planning.

Topic 2. Field techniques for the analysis of hydro-geographical processes and the natural environment planning.

Topic 3. Field techniques for the analysis of biogeographical and dendrochronological processes and the natural environment planning.

Topic 4. Field techniques for the analysis of geomorphological processes in mountain areas and the natural environment planning.

Topic 5. Field techniques for locating, measuring and georeferencing of natural processes in relation to the natural environment planning.

Course planning and calendar

The course is divided into five topics. Each topic includes both lecture sessions and practical activities. Each topic runs during three sessions (2 hours/session) of the semester. In April/May the students and lecturers will have a field trip (three days in the field). Academic activities and sessions will finish after the written exam (theoretical part) takes place. Lectures and practical activities take place in a classroom with capacity for 18 students, 12 computers with Internet access, projector and blackboard.

Field work will take place in different parts of the Aragonese geography with appropriate physical tools and previous field experience (cartography, publications, reports, etc.)

- The hydromorphology field will be developed in two nearby rivers but with different dynamics.
- Field work referred to dendrochronology be held in ravines (dendrogeomorphology) and forests (dendroecology) from the Zaragoza's environment.
- The application of field techniques in biogeography will be held in several representative ecosystems of the Aragonese territory, with data and previous field experience.

Bibliography and recommended resources

Augustin, N., Borchers, D.L., Clarke, E.D., Buckland, S.T. y Walsh, M. Spatiotemporal modelling for the annual egg production method of stock assessment using generalized additive models, en Canadian journal of fisheries and aquatic sciences 55, 1998, p.2608-2621. . Ottawa : Fisheries Research Board of Canada.

Bennett, Donald P.. Introducción a la ecología de campo / Donald P. Bennett y David A. Humphries ; traducido por Alfredo Cruz Herce ; revisado por Miguel Morey Andreu . - 1a. ed. española, de la 2a. ed. inglesa Madrid : Blume, 1978.

Cámara R., Díaz del Olmo F. y Borja Barrera C. "Muestreo en transecto de formaciones vegetales de fanerófitos y caméfitos (II): estudio de los sabinars de la Resrva Biológica de Doñana" en Estudios Geográficos, 74/274, pp. 89-114, 2013

Chao, C.T. y Thompson S.K.: "Optimal adaptive selection of sampling sites." en Environometrics nº 12, pp. 517-538, 2001.

Diaconis, P. y Efron, B.. "Computer intensive method in statistics" en Scientific American, nº 248(5), pp. 116-130, 1983

Gürtler, Ricardo. "Estimación de la abundancia: Introducción al muestreo de poblaciones." Trabajo práctico 3 [<http://biolo.bg.fcen.uba.ar/ecologia/TP3.pdf>].

Gutiérrez Elorza, Mateo. Geomorfología climática / Mateo Gutiérrez Elorza Barcelona : Omega, 2001

Larsen, D.P., Thornton, K.W., Urquart, N.S., Paulsen, S.G.. "The role of sample surveys for monitoring the condition of the Nation's lakes". En Environmental Monitoring and Assessment 32 (1994), pp. 101-134.

Mapa geomorfológico de Aragón [material cartográfico] / José Luis Peña Monné... [et al.] 255 E. 1:325.000 ; proyec. U.T.M. : Consejo de Protección de la Naturaleza de Aragón, D.L. 2002.

Metodología y práctica de la biogeografía / dirección, coordinación y edición científica, Guillermo Meaza Rodríguez ; [Ma. Eugenia Arozena Concepción...(et al.)] . - [1a ed.] Barcelona : Ediciones del Serbal, 2000.

Moreno, Claudia E. Métodos para medir la biodiversidad / Claudia E. Moreno Zaragoza : CYTED : ORCYT-UNESCO : Sociedad Entomológica Aragonesa, 2000.

Panizza, Mario. Geomorfologia applicata : metodo di applicazione alla pianificazione territoriale e alla valutazione d'impatto ambientale / Mario Panizza . - 1. ed. Roma : La Nuova Italia Scientifica, 1988.

Pedraza Gilsanz, Javier de. Geomorfología : principios, métodos y aplicaciones / Javier de Pedraza Gilsanz ; colaboradores Rosa María Carrasco González...[et al.] Alcorcón, Madrid : Rueda, D.L. 1996.

Stevens, D.L. Jr.. "Implementation of a national environmental monitoring program" en Journal of Environmental Management, 42 (1994), pp. 1-29