

Información del Plan Docente

Academic Year	2016/17
Academic center	201 - Escuela Politécnica Superior
Degree	277 - Degree in Environmental Sciences
ECTS	6.0
Course	
Period	Four-month period
Subject Type	Optional
Module	---

1.Basic info**1.1.Recommendations to take this course****1.2.Activities and key dates for the course****2.Initiation****2.1.Learning outcomes that define the subject****2.2.Introduction****3.Context and competences****3.1.Goals****3.2.Context and meaning of the subject in the degree****3.3.Competences****3.4.Importance of learning outcomes****4.Evaluation****5.Activities and resources****5.1.General methodological presentation**

To achieve the proposed objectives are used in a coordinated several procedures. On the one hand the theoretical foundations are explained in the classroom and further reading and study method are proposed. Furthermore , in the laboratory, in the classroom and in the field with the presence of teachers , students must resolve the taxonomy, biogeography and phytocoenology various cases provided by the teacher. In addition students are responsible for various jobs that may require field, laboratory and literature that should apply for resolution knowledge drawn from exhibitions of classroom theory and application in the laboratory

5.2.Learning activities

Theory classes . Classroom. Exhibition program theory. Readings and complementary work . It is available to the student documents used in the explanatory theory

Classes practices. The practicals are laboratory , classroom and field . In the first the student resolves the issues raised by the teacher concerning plants . Classroom instruction on the development of personal work that the student will have to occur . Field they scheduled routes for species and phytocoenoses recognition

Monitoring the work . Teachers , besides attending the doubts of the theory part , are monitoring and guidance of the personal work of students

5.3.Program

THEORY

1. Biogeography and Geobotany. Definition, background and relation to other sciences
2. Systematic Botany
3. Evolution, speciation, phylogeny and Taxonomy
4. Chorology. Origin and processes of taxa land distribution. Characterization and chorological typology
5. Naturalness of the plants
6. Protected or threatened plants and communities
7. Phytocoenology. Phytocoenosis. Floral composition and structure. Territorial distribution
8. Systems of vegetation studies
9. World, Iberian and regional Vegetation

PROGRAM OF PRACTICALS

- 1 Systematics and biogeography project
2. Project fitocenology
3. Excursions for the identification of species and phytocoenosis
4. Laboratory Identification

5.4.Planning and scheduling

The schedule of classes , schedules , tutorials and examinations shall follow the academic calendar of the University of Zaragoza and the Polytechnic School of Huesca

Calendar of activities for weeks

- 01 Theory : 2 h . Practice : 2 h
- 02 Theory : 2 h . Practice : 2 h
- 03 Theory : 2 h . Practice : 2 h
- 04 Theory : 2 h . Practice : 2 h
- 05 Theory : 2 h . Practice : 2 h
- 06 Theory : 2 h . Practice : 2 h
- 07 Theory : 2 h . Practice : 2 h
- 08 Theory : 2 h . Practice : 2 h
- 09 Theory : 2 h . Practice : 2 h
- 10 Theory : 2 h . Practice : 2 h
- 11 Theory : 2 h . Practice : 2 h
- 12 Theory : 2 h . Practice : 2 h
- 13 Theory : 2 h . Practice : 2 h
- 14 Theory : 2 h . Practice : 2 h . Output field : 10 hours
- 15 Theory : 2 h . Practice : 2 h

5.5.Bibliography and recomended resources

Basic Bibliography

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Complementary Bibliography

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- Cole, T. C. H.; Hilger, H. H 2012. Angiosperm phylogeny. Flowering Plant Systematics.
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- Braun-Blanquet, J. 1979. Fitossociología : bases para el estudio de las comunidades vegetales. Ed. Blume. Madrid
- Vascular plant communities of Spain and Portugal : addenda to the syntaxonomical checklist of 2001 / Salvador Rivas-Martínez...[et al.] @editorLeón : Universidad de León, Servicio de Publicaciones, 2002 . León : Universidad de León, Servicio de Publicaciones, 2002
- Invasiones biológicas / coordinado por Montserrat Vilà ... [et al.]. Madrid : Consejo Superior de Investigaciones Científicas, 2008
- Terradas, J. 2001. Ecología de la vegetación: de la ecofisiología de las plantas a la dinámica de comunidades y paisajes. Omega. Barcelona.
- Bañares, A.; Blanca, G.; Güemes, J.; Moreno Saiz, J. C.; Ortiz, S. —Eds.— 2010. Atlas y libro rojo de la flora vascular amenazada de España. Adenda 2010. Dirección General de Conservación de la Naturaleza, Sociedad Española de Biología de la Conservación de Plantas. Madrid
- Moreno Saiz, J.C. —Coord.— 2010. Lista Roja 2010 de la Flora Vascular Española. Dirección General de Medio Natural y Política Forestal (Ministerio de Medio Ambiente y Medio Rural y Marino, y Sociedad Española de Biología de la Conservación de Plantas). Madrid.