25215 - Ecology II

Información del Plan Docente

Academic Year	2017/18
Faculty / School	201 - Escuela Politécnica Superior
Degree	277 - Degree in Environmental Sciences 571 - Degree in Environmental Sciences
ECTS	6.0
Year	2
Semester	Second Four-month period
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

This subject is offered in the English Friendly form

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

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

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The learning of the subject is based on the following:

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Theory lessons. The student will be provided with references and presentations of each chapter of the subject before the lectures. During theory lessons some students chosen by the teacher will present their view on the lesson, based on their own knowledge and the information provided by the teacher. This information should have been previously studied by the students.

The teacher will give master lectures of each lesson and will question the students. External experts will give specific conferences.

The evaluation of the theory will be completed with two tests (Continuous Evaluation).

The practical part will consist in: (i) a full day field work devoted to ecosystem recognition and (ii) the elaboration of several ecology reports of a field area near Huesca city. These reports will be supervised by the teacher. They will consist in regular team tutorials. Both practical activities will be completed with: (i) computer sessions in order to learn to manage ecologic models, and (ii) lab sessions dedicated to perform different analysis and experiments.

5.2.Learning tasks

The program offered to the students to help them achieve the expected results, comprise the following activities:

Theory sessions in the classroom

A presentation of each lesson will be provided, as well as additional references, both available on Moodle platform. This information has to be studied previous to the lecture by the students.

These sessions will comprise student's involvement and master presentation by the teacher. Other sessions will correspond to expert's participation in the subject and seminars presented by students.

Lab and computer practices

5.3.Syllabus

Theory program

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Theory sessions in the classroom

A presentation of each lesson will be provided, as well as additional references, both available on Moodle platform. This information has to be studied previous to the lecture by the students, at least by the students who have chosen the Continuous Evaluation.

These sessions will comprise student's involvement and master presentation by the teacher. Other sessions will correspond to expert's participation in the subject and seminars presented by students.

Unit 1. Ecosystems

1. Energy and matter in the ecosystemss

2. Biological production

3. Nutrient cycles

4. Trophic nets

Unit 2. Interactions

1. Intraspecific competition

2. Interactions

3. Interspecific competition

4. Exploitation: Herbivory, predation, parasitism

Unit 3. Communities

1. Type of communities and ther structure

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2. Biological diversituy

3. Succession and perturbations

Unit 3. Landscape and Biosphere

1. Relatinons between humans and nature

2. Global Change

3. Contribution of Ecology to Sustainable Development

Field work

One day activities (8-9 hours) in which working material is provided, with a script to be completed through students' direct observations in the field.

Lab and computer practivces

A script will be provided with on-site and non-on-site activities.

Tutorials

To follow up theory and practice lessons personal and team tutorials will be provided.

Academic work

Different subjects on Ecology and Environment will be offered th toe sutdents. Students should ellaborate a report

tutorized by the teacher.

5.4.Course planning and calendar

Calendar of on-site lectures and report presentations

The average student should dedicate about 150 h to this 6 ECTS subject.

Activity and week	1	2	3	4	5	6	7	8	9	10
On-site										
Theory	2	2	2	2	2	1	2	2	2	1
Field work			7				7			
Field work tutorials										
Lab										
Computer practice				2	2	2				
Evaluation						1				1
Non on-site										
Academic work						3	2	3	2	
Study	4	4	5	5	5	3	3	3	3	5

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TOTAL	**6**	**6**	**14**	**9**	**9**	**10**	**14**	**8**	**7**	**7**

Activity and week	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**TOTAL**
On-site										
Theory	**2**	**2**	**2**	**2**	**1**					**27**
Field work										**14**
Field work tutorials	**3**			**3**						**6**
Lab		**2**	**2**							**4**
Computer practice										**6**
Evaluation					**1**			**2**		**5**
Non on-site										
Academic work										**10**
Study	**4**	**5**	**5**	**5**	**4**	**6**	**6**			**75**
TOTAL	**9**	**9**	**9**	**10**	**6**	**6**	**6**	**2**	**0**	**147**

The lectures calendar will consider the University of Saragossa calendar. Timetable of the subject, tutorials, exams and the affected classrooms can be checked in the School's web page.

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5.5.Bibliography and recommended resources

The references of each course will be updated and can be consulted from the library's web.

BB	Begon, Michael. Ecología : individuos, poblaciones y comunidades / Michel Begon, John L. Harper, Colin R. Townsend ; traducido por Miquel Riba Rovira, Raymond Salvador Civil . - 3ª ed. Barcelona : Omega, D.L.1999
BB	Smith, Thomas Michael. Ecología / Thomas M. Smith, Robert Leo Smith . - 6a. ed. Madrid [etc.] : Pearson Addison-Wesley, D.L. 2007
BC	Margalef, Ramón. Planeta azul, planeta verde / Ramón Margalef . - [1a. ed.] Barcelona : Prensa Científica, 1992
BC	Rodríguez, Jaime. Ecología / Jaime Rodríguez Madrid : Pirámide, D.L.1999
BC	Terradas, Jaume. Ecología de la vegetación : de la ecofisiología de las plantas a la dinámica de comunidades y paisajes / Jaume Terradas. . Barcelona : Omega, D.L. 2001

The updated recommended bibliography can be consulted in:
http://psfunizar7.unizar.es/br13/egAsignaturas.php?id=10975