

25215 - Ecology II

Syllabus Information

Academic Year: 2020/21

Subject: 25215 - Ecology II

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.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

This subject is offered in the [English Friendly](#) form

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

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

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, practice sessions, fieldwork and tutorials.

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.

4.2.Learning tasks

This 6 ECTS (150 hours) course is organized as follows:

- **Lectures.** A presentation of each lesson will be provided, as well as additional references, both available on Moodle platform which will have to be studied before every lecture. 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. External experts will give specific conferences.
- **Laboratory and computer practice sessions.**

- **Fieldwork.** 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. 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 assignment.** Different topics on Ecology and Environment will be offered to the students which should elaborate a report supervised by the teacher.
- **Assessment.** The evaluation of the theory will be completed with two tests. (Continuous Evaluation).

4.3.Syllabus

This course will address the following topics:

Lectures

- Unit 1. Ecosystems
 - 1. Energy and matter in the ecosystems
 - 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 their structure
 - 2. Biological diversity
 - 3. Succession and perturbations
- Unit 3. Landscape and Biosphere
 - 1. Relations between humans and nature
 - 2. Global Change
 - 3. Contribution of Ecology to Sustainable Development

4.4.Course planning and calendar

Calendar of face-to-face lectures and report presentations

Activity/week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<i>Face to face</i>																	
Lectures	2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	
Team work																	
Field work			7			7						7					
ECTS tutorials																	
Evaluation								1								1	
<i>Autonomous work and study</i>																	
Study	4	6	0	4	4		4	3	6	6	6	6		6	5	4	8
Team work				2	2	2	2	2									
TOTAL	6	8	9	8	8	11	8	8	6	8	8	8	9	8	7	7	8

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Sciences website and Moodle.

4.5. 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://psfunizar10.unizar.es/br13/egAsignaturas.php?id=10975>