

Course guide

210927 - CI P - Landscape Science

Last modified: 14/12/2023

Unit in charge: Barcelona School of Architecture
Teaching unit: 745 - DEAB - Department of Agri-Food Engineering and Biotechnology.

Degree: MASTER'S DEGREE IN LANDSCAPE ARCHITECTURE (Syllabus 2015). (Optional subject).

Academic year: 2023 **ECTS Credits:** 3.5 **Languages:** Catalan, Spanish, English

LECTURER

Coordinating lecturer: JORDI IZQUIERDO FIGAROLA

Others: Primer quadrimestre:
JORDI IZQUIERDO FIGAROLA - Grup: 1R1S

TEACHING METHODOLOGY

Sessions will be in the form of participatory master class, where the concepts and theoretical foundation will be explained by means of Powerpoint presentations and the blackboard.

These sessions will be complemented with practical sessions. It will be one practical session on Plant Biology that will consist on a trip to the gardens of the Baix Llobregat campus to identify species and characterize them according to the explanations given at class. Also there will be 4 sessions on Introduction to the Ecology that will consist on exercises about concepts discussed in class. These exercises are to be delivered once finalized, for being scored.

The students also will have to make a herbarium in accordance with guidelines that will explain in class. The Herbarium will be scoring, mandatory and personal.

LEARNING OBJECTIVES OF THE SUBJECT

Identifying plant diversity and describe the morphology of vascular plants and their adaptive responses to the environment.

Recognizing and understanding the functions of plant nutrition and identifying the eco-physiological responses to environmental variations.

Identifying the relationships of organisms with their environment and understand the concepts linked to the ecology of populations. Describing interspecific relationships.

Understanding the functioning of ecosystems and describe its structure and organization in space and time.

STUDY LOAD

Type	Hours	Percentage
Hours large group	26,3	100.00

Total learning time: 26.3 h

CONTENTS

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Description:

The first part of the course is devoted to Plant Biology. We intend that the student was able to recognize at a glance the diversity of vegetation and can describe the morphology of vascular plants, as well as their adaptive responses to the environment. To achieve this, the main features of the vegetable kingdom, the morphology of plants and their life processes (reproduction, nutrition) will be explained. This first part ends by identifying the eco-physiological responses of plants to environmental variations.

The second part of the course is devoted to an Introduction of Ecology. It describes the relationships of plants with their environment in order to know the factors involved and to understand and predict the evolution of populations over time. It also describes the structure and organization of a community space.

Module 1: Plant biology

-Vegetables. Classification and nomenclature of plants.

-Vascular plants: morphology and multiplication.

Plant ecophysiology: water, hydrocarbon and mineral nutrition and plant adaptations to environmental factors (water, nutrients and temperature).

Module 2: Introduction to ecology

-Ecology - ecosystem - environmentalism.

-Biogeography: the distribution of living beings.

-Population: concepts, demographics and dynamics.

-Species interactions: competition, predation, mutualism and parasitism.

-Communities: Structure and dynamics of the communities.

Related activities:

Go to spanish or catalan version

Full-or-part-time: 49h

Theory classes: 13h

Laboratory classes: 4h 30m

Self study : 31h 30m

ECOLOGY

Description:

content english

Full-or-part-time: 49h

Theory classes: 13h

Laboratory classes: 4h 30m

Self study : 31h 30m

GRADING SYSTEM

The final mark will be determined by:

Mark = $0.60 \cdot \text{exam} + 0.25 \cdot \text{herbarium} + 0.15 \cdot \text{practices report}$

(Go to spanish or catalan versión)

Continuous telematic evaluation

In online teaching situations, continuous assessment will be carried out synchronously and asynchronously by the means established by the University and the School, with a periodic record of academic activity through submissions, forums, questionnaires or any other means facilitated by the Atenea platform, or the alternatives provided to the teaching staff. In the situations in which this telematic teaching is a product of face-to-face teaching that has already begun, or for questions of extra-academic order, the changes in the weightings or regular control systems of the teaching will be communicated in detail to all students by the Athena of each subject.

Telematic final evaluation

If the continuous telematic evaluation is not positive, a second evaluation can be carried out, which will consist of a final test of a global nature in telematic format that will be established in accordance with the criteria of the professor responsible and the media and ICTs provided by the University or School.

The measures for adaptation to non-classroom teaching will be implemented in accordance with the criteria of ICT security and personal data protection to ensure compliance with the legislation on Personal Data Protection (RGPD and LOPDGD)

BIBLIOGRAPHY

Basic:

- Begon M, Harper JL i Townsend CR. Ecología: individuos, poblaciones y comunidades. 3ª ed. Barcelona: Omega, cop. 1999. ISBN 8428211523.
- Flora manual dels Països Catalans. 3a ed. Barcelona: Pòrtic, 2005. ISBN 8473068572.
- Font, P. Iniciació a la botànica: morfologia externa. 2a. ed. act. Barcelona: Fontalba, 1979. ISBN 848553008X.
- Smith, R. L.; Smith, T. M.. Ecología. 6a ed. Madrid: Addison Wesley, 2007. ISBN 9788478290840.
- Fundamentos de fisiología vegetal. 2a ed. Madrid; Barcelona: McGraw-Hill/Interamericana; Edicions UB, 2008. ISBN 9788448151683.

RESOURCES

Hyperlink:

- INTRANET DOCENT. <https://atenea.upc.edu/moodle/login/index>