

**Proyecto/Guía docente de la asignatura***Project/Course Syllabus*

Asignatura <i>Course</i>	Geobotany		
Materia <i>Subject area</i>	Natural Sciences		
Módulo <i>Module</i>	Optional module / International Semester on Forestry		
Titulación <i>Degree Programme</i>	Bachelor degree in Forest and Natural Environment Engineering		
Plan <i>Curriculum</i>	449	Código <i>Code</i>	47137
Periodo de impartición <i>Teaching Period</i>	Spring semester	Tipo/Carácter <i>Type</i>	Optional
Nivel/Ciclo <i>Level/Cycle</i>	Bachelor	Curso <i>Course</i>	4º
Créditos ECTS <i>ECTS credits</i>	3		
Lengua en que se imparte <i>Language of instruction</i>	English		
Profesor/es responsable/s <i>Responsible Teacher/s</i>	Dr. Jaime Madrigal González. Profesor Titular de Universidad (Coordinador de la asignatura)		
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Departamento <i>Department</i>	Agroforestry Sciences		
Fecha de revisión por el Comité de Título <i>Review date by the Degree Committee</i>	30/06/2026		



1. Situación / Sentido de la Asignatura

Course Context and Relevance

1.1 Contextualización

Course Context

This course explores the biogeography and ecology of the world's main biomes. It introduces the earth's biological history and development of regional floras. Topics covered in this course include the distribution patterns of biomes, from the poles to the tropics, their ecological adaptations to climate and soil, vegetation dynamics and response to disturbance. Land use and global environmental change will be also taken in account. The scope is global, with secondary emphasis on Mediterranean ecosystems.

1.2 Relación con otras materias

Connection with other subjects

The course will develop a broad range of insights useful to forestry and natural resources students. It is an extraordinary introduction to the variety of trees and other plants of value to man, providing approaches to environmental and social problems.

1.3 Prerrequisitos

Prerequisites

There are not pre-requisites for Geobotany, although a background of Biology, Dendrology, Botany, Ecology, Climatology and Soil Sciences would be very useful.

As the subject is taught in English, it is assumed that the student has a basic to intermediate knowledge of the language in the 4 skills: listening, speaking, reading and writing.

2. Resultados del proceso de formación y de aprendizaje (RD 822/2021) o competencias (RD 1393/2007)

Learning outcomes (RD 822/2021) or competences (RD 1393/2007)

Para los planes de estudio al amparo del RD 822/2021 deben completarse conocimientos o contenidos, habilidades o destrezas y las competencias.

Para los planes de estudio al amparo del RD 1393/2007 deben completarse las Competencias Generales y las Competencias Específicas.

For study programmes under RD 822/2021, it is necessary to specify knowledge or content, skills or abilities, and competences.

For study programmes under RD 1393/2007, General Competences and Specific Competences must be included.

2.1 (RD822/2021) Conocimientos o contenidos

Knowledge or content

Theoretical contents

Block 1: Introduction to Geobotany and Biogeography

Theme 1. Earth history and Vegetation

Theme 2. Biogeography and Geobotany

Block 2: World's biomes

Theme 3. Tundra

Theme 4. Alpine tundra

Theme 5. Taiga

Theme 6. Temperate Deciduous Forests

Theme 7. Temperate Rainforests

Theme 8. Temperate Grasslands

Theme 9. Mediterranean woodlands

Theme 10. Deserts

Theme 11. Tropical dry forests and Savannas

Theme 12. Tropical Rainforests

2.2 (RD822/2021) Habilidades o destrezas

Skills or abilities

Learning skills and abilities necessary to build upon and connect prior studies on Botany, Ecology and Soil Sciences with a high degree of autonomy

2.3 (RD822/2021) Competencias

Competences

The General competences (G1 to G27) will be addressed on a global basis, and, particularly, efforts will be made to the compliance of:

G3 Be able to analyze and synthesize.

G4 To be capable of organizing and of planning.

G5 Be able to communicate effectively, orally and in writing, with both internal audiences.

G15 To show critical reasoning.

**3. Objetivos****Course Objectives**

- Demonstrate knowledge of the main historical processes of the life on earth.
- Demonstrate basic understanding of global climate.
- Be familiar with the major vegetation types of the World.
- Be familiar with important boreal, temperate and tropical trees.
- To understand the dynamics of natural ecosystems, where they occur and its adaptations to environmental conditions.
- To understand how major biomass have changed in the past and how they may change due to global environmental change.
- To do basic bibliographic research and present scientific information on a forest product of a representative country.
- Learnt to assess and analyze the work of a colleague student.

4. Contenidos y/o bloques temáticos**Course Contents and/or Modules****c. Contenidos****c. Contents**

- | | |
|----------------------------|----------|
| • Bloque 1. Introduction | 0.2 ECTS |
| • Bloque 2. World's biomes | 2.8 ECTS |

d. Métodos docentes**d. Teaching and Learning methods**

- Lecture-style classes in the classroom. No handouts are provided; slides will be uploaded after class as supplementary material, but students are expected to expand on the material using their own notes or textbooks.
- Seminars (focused on specific topics) that require active student participation within a flipped classroom framework. Specifically, the course follows a "culture of thinking" methodology in the classroom and employs thinking routines during so-called "press conferences."

In any case, the instructor reserves the right to restrict the use of devices such as computers, tablets, or cell phones during lecture and seminar sessions.

e. Plan de trabajo**e. Work plan**

First to Second week: Block 1 (Introduction to Geobotany and Biogeography)

Third to Twelfth week: Block 2 (World's Biomes)

Thirteenth week: Urban field trip



f. Evaluación

f. Assessment

Regular Assessment:

Theoretical exam (multiple-choice (60%) + short-answer questions (40%)) 80% of the final grade

Preparation and presentation of a scientific poster 20% of the final grade

Make-up Assessment:

Theoretical exam (multiple-choice (60%) + short-answer questions (40%)) 80% of the final grade

Preparation and presentation of a scientific poster: 20% of the final grade

Students must pass both the theoretical and practical exams (with a minimum score of 5 out of 10) to pass the course.

g Material docente

g Teaching material

Computer and projector in the classroom for conducting lectures

Materials for identifying species (field guides, books, the FLORA INCOGNITA app)

g.1 Bibliografía básica

Required Reading

Archibald, O.W. (1995) Ecology of World Vegetation. Chapman & Hall. London.

Shultz, J. (1995) The Ecozones of the World. The Ecological Divisions of the Geosphere. Springer. Berlin.

Walter, H. 1985. Vegetation of the Earth and Ecological Systems of the Geo-biosphere. Springer. Berlin.

g.2 Bibliografía complementaria

Supplementary Reading

Freeman S. 2009. Biology. 3ª edición. Ed. Pearson Educación, México, 1392 páginas.

Lecture pdfs will be posted on the course website (Moodle).

g.3 Otros recursos telemáticos (píldoras de conocimiento, blogs, videos, revistas digitales, cursos masivos (MOOC), ...)

Additional Online Resources (microlearning units, blogs, videos, digital journals, massive online courses (MOOC), etc.)

h. Recursos necesarios

Required Resources

Geodiode (Biomes-The living landscapes on Earth)



<https://www.youtube.com/playlist?list=PLu83ZwRbQvIvhdKLT2EvKNWb1F-KWs7>

5. Métodos docentes y principios metodológicos

Instructional Methods and guiding methodological principles

- Lectures led by the instructor with a participatory approach
- Flipped classroom seminars based on a culture of critical thinking in the classroom
- Field exercises for the identification of plant species and communities (The urban trip)

6. Tabla de dedicación del estudiantado a la asignatura

Student Workload Table

ACTIVIDADES PRESENCIALES o PRESENCIALES o A DISTANCIA ⁽¹⁾ FACE-TO-FACE/ ON-SITE or ONLINE ACTIVITIES ⁽¹⁾	HORAS HOURS	ACTIVIDADES NO PRESENCIALES INDEPENDENT / OFF-CAMPUS WORK	HORAS HOURS
Lectures	18	Study and personal work	36
Seminars	5	Preparation of oral presentation	9
Prácticas	7		
Total presencial Total face-to-face	30	Total no presencial. Total non-face-to-face	45
TOTAL presencial + no presencial Total			75

(1) Distance face-to-face activity refers to a situation in which a group of students, seated in a classroom on campus, attends a class via live videoconference delivered by the instructor in real time.

7. Sistema y características de la evaluación

Assessment system and criteria

INSTRUMENTO/PROCEDIMIENTO ASSESSMENT METHOD/PROCEDURE	PESO EN LA NOTA FINAL WEIGHT IN FINAL GRADE	OBSERVACIONES REMARKS
Final Exam (Ordinary examination session)	20%	Mandatory - individual Short questions and blank maps to draw the area of a biome. Focus will be on understanding concepts.
Poster presentation	80%	Mandatory - individual A rubric with grading details will be provided. Emphasis will be on information, layout and speaking.

To calculate the final grade for both the regular and make-up exam sessions, students must pass both components separately: the final theory exam and the poster presentation. There are no make-up opportunities.