



UNIVERSIDAD DE CÓRDOBA

FACULTAD DE CIENCIAS  
**GRADO DE BIOLOGÍA**  
2024/25 YEAR  
**GEOBOTÁNICA**



## Course details

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**Course name:** GEOBOTÁNICA**Code:** 100432**Degree/Master:** GRADO DE BIOLOGÍA**Year:** 4**Field:** OPTATIVA**Character:** OPTATIVA**Duration:** SECOND TERM**ECTS Credits:** 6.0**Classroom hours:** 60**Face-to-face classroom percentage:** 40.0%**Study hours:** 90**Online platform:** <https://moodle.uco.es/>

## Coordinating teacher

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**Name:** GALÁN SOLDEVILLA, CARMEN**Department:** BOTÁNICA, ECOLOGÍA Y FISILOGÍA VEGETAL**Office location:** Campus de Rabanales. Edificio Celestino Mutis, 3ª planta**E-Mail:** [bv1gasoc@uco.es](mailto:bv1gasoc@uco.es)**Phone:** 957218719

## Brief description of the contents

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This subject is about introducing the students in the knowledge of vegetation, presenting as fundamental parameters: a) variations among different types of vegetation; b) causes of these variations; c) biogeographical prospect of these variations

## Prerequisites

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### Prerequisites established in the study plan

Those indicated for the module: The student will be able to matriculate in subjects of this Module once they have passed 60 credits of basic training, and at least another 60 compulsory credits. It is also needed be in possession of the B1 level accreditation in English

### Recommendations

None specified

## Study programme

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### 1. Theory contents

#### Block 1. Introduction

1. Case study: studies on chorology, ecology, sociology and paleobotany of three forestry species in Central Europe: *Fagus sylvatica*, *Quercus robur* and *Pinus sylvestris*. Definition and parts of the Geobotany.

#### Block 2. Phytogeography (Floristic Geobotany)

2. Geographic Ranges. Criteria to differentiate ranges. Cosmopolitan and Endemic geographic range. Origin and type of Endemism. Patterns of endemism.

3. Principles of discontinuity. Disjunction. Vicariance. Colonization density.

4. Evolution of the Geographical Range; diffusion. Biotic exchange and dispersion routes.

5. Floristic division of Biosphere. Geoelements or Floristic Elements. Criteria for delimitation of floristic units. Link taxa.

6. Holarctic Kingdom. Subkingdom Tetiano. Mediterranean Region. Biogeography in Spain.

7. Bioclimatology. Vegetation Regions. Vegetation Belts. Bioclimatic Belts.

#### Block 3. Geobotany and Phytosociology

8. Structure of the vegetation. Concepts. Criteria and Classification Systems. Structural Units and Structural Systems.

9. Floristic Units and Floristic Systems. I Methodology on Phytosociology. II Multivariate Methods.

10. Floristic Units and Floristic Systems. II Multivariate Methods. Ordination and Classification

11. Vegetation Dynamic. Daily and Seasonal Vegetation Dynamic, Phenology. Long Term Vegetation Dynamic, Succession. Succession types. Succession Units and Vegetation Series.

12. Climax definition. Actual, Potential and Primitive vegetation. Natural, Seminatural and Cultivated vegetation.

13. The concept of the plant community: a first approach; limiting environmental factors; the plant intrinsic properties. Plant community definition. The nature of the vegetation.

#### Block 4. Vegetation of the Iberian Peninsula.

14. Forests in the plant landscape of the Iberian Peninsula.

15. Changes in Forests by human actions.

### 2. Practical contents

1) Hypothesis and experimental design in biogeographic and vegetation studies

2) Sampling methods: a) Phytosociological inventories b) Transects c) Quadrants

3) Statistical analysis of vegetation data

4) Vegetation mapping

5) Visits and practical study of plant communities in the Mediterranean region

## Bibliography

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Rivas-Martínez S. 1987. Memoria del Mapa de Series de Vegetación de España. ICONA. Madrid.

Rivas-Martínez S, Díaz TE, Fernández González F, Izco J, Loidi J, Lousa M, Penas A. 2002. Vascular Schulze ED, Beck E, Müller-Hohenstein K. 2002. Plant Ecology. Springer-Verlag.

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Takhtajan A. 1986. Floristic regions of the world. University of California Press. Berkeley Begon Harper &

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## Methodology

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### General clarifications on the methodology (optional)

The excursions and visits will be conditioned to the reservation of schedules for them in the academic schedules. If the reservation is not made from the coordination of the degree, they will be replaced by computer data analysis practices and tutorials to carry out the evaluation work.

### Methodological adaptations for part-time students and students with disabilities and special educational needs

Part-time students and / or students with special needs should contact the teachers of the subject in the first two weeks of class for planning the necessary adaptations in the teaching methodology

**Face-to-face activities**

Activity	Large group	Medium group	Total
<i>Assessment activities</i>	5	-	5
<i>Field trips</i>	-	18	18
<i>Practical experimentation activities</i>	-	9	9
<i>Projects based on the course contents</i>	28	-	28
<b>Total hours:</b>	<b>33</b>	<b>27</b>	<b>60</b>

**Off-site activities**

Activity	Total
<i>Exercise and problem solving activities</i>	30
<i>Information processing activities</i>	60
<b>Total hours</b>	<b>90</b>

**Results of the training and learning process****Knowledge, competencies and skills**

- CE81n Interpret different operational responses relating to particular environments.
- CB4v5 Capable of critically analysing and synthesising, in line with the scientific method.
- CB14v1 Ethical commitment to environmental and social issues.
- CB16v1 Ability to organise and plan.
- CB17v1 Knowledge of applied IT in Biology
- CB18v4 Ability to put theory into practice.
- CE13v4 Development of the skills to identify characteristics of mediterranean vegetation
- CE13v5 Development of the skills to show, characterise and manage populations and plant communities.
- CE82n An understanding of Biology's fundamental concepts

**Assessment methods and instruments**

Intended learning outcomes	Examination	Means of practical execution	Students assignments
CB14v1			X

<b>Intended learning outcomes</b>	<b>Examination</b>	<b>Means of practical execution</b>	<b>Students assignments</b>
<i>CB16v1</i>			X
<i>CB17v1</i>			X
<i>CB18v4</i>		X	X
<i>CB4v5</i>		X	
<i>CE13v4</i>	X		X
<i>CE13v5</i>		X	X
<i>CE81n</i>	X		X
<i>CE82n</i>	X	X	X
<b>Total (100%)</b>	<b>50%</b>	<b>25%</b>	<b>25%</b>
<b>Minimum grade (*)</b>	<b>5</b>	<b>5</b>	<b>5</b>

(\*)Minimum mark (out of 10) needed for the assessment tool to be weighted in the course final mark. In any case, final mark must be 5,0 or higher to pass the course.

#### **General clarifications on instruments for evaluation:**

Minimum grade to eliminate subject and period of validity of partial grades: All evaluation activities will eliminate subject with a grade equal to or greater than 5 points, being valid until the second call of the same academic year.

The practical lessons will be evaluated from 0 to 10. For evaluation, will be taken into account the lessons both, in field and computer sessions, as well as the teacher proposed exercises and the autonomous work by part of the student body

#### **Clarifications on the methodology for part-time students and students with disabilities and special educational needs:**

Part-time students and / or students with special needs should contact the teachers of the subject in the first two weeks of class to agree on the necessary adaptations in the evaluation criteria

#### **Clarifications on the evaluation of the extraordinary call and extra-ordinary call for completion studies:**

In the extraordinary calls, the students will be examined for the theory exam and, optionally, they will be able to resubmit the practical evaluation works. In case of not presenting them and in an exceptional way, the qualifications that they would have obtained in these activities in previous calls will be used.

**Qualifying criteria for obtaining honors:**

*The same criteria in the regulations of the University of Cordoba will be used*

**Sustainable development goals**

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Quality education

Climate action

Life on land

**Other Faculty**

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**Name:** MARTÍNEZ BRACERO, MOISÉS

**Department:** BOTÁNICA, ECOLOGÍA Y FISIOLOGÍA VEGETAL

**Office location:** Campus de Rabanales. Edificio Celestino Mutis, 3ª planta

**E-Mail:** b52mabrm@uco.es

**Phone:** 957218719

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*The methodological strategies and the evaluation system contemplated in this Teaching Guide will respond to the principles of equality and non-discrimination and must be adapted according to the needs presented by students with disabilities and special educational needs in the cases that are required. Students must be informed of the risks and measures that affect them, especially those that may have serious or very serious consequences (article 6 of the Safety, Health and Welfare Policy; BOUCO 23-02-23).*

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