



UNIVERSIDAD DE CORDOBA

FACULTAD DE CIENCIAS
GRADO DE CIENCIAS AMBIENTALES
2024/25 YEAR
**BASES BOTÁNICAS PARA LA GESTIÓN
DEL MEDIOAMBIENTE**



Course details

Course name: BASES BOTÁNICAS PARA LA GESTIÓN DEL MEDIOAMBIENTE

Code: 101539

Degree/Master: GRADO DE CIENCIAS AMBIENTALES

Year: 2

Name of the module to which it belongs: CONSERVACIÓN, PLANIFICACIÓN Y GESTIÓN DEL

Field: ORDENACIÓN DEL TERRITORIO Y GESTIÓN DEL MEDIO AMBIENTE

Character: OBLIGATORIA

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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Brief description of the contents

General concepts of plant organisation and structure. Reproduction and life cycles. Plant diversity. Differentiating characteristics of the main plant groups, with special reference to those that make up our natural heritage. Endemic flora. Threatened flora. Bases for the description of vegetation.

Prerequisites

Prerequisites established in the study plan

English certificate B1

Recommendations

English certificate B2

Study programme

1. Theory contents

1. Theory contents

Topic 1.- Fungi. Vegetative and reproductive characteristics. Main groups. Ecology. Lichens

Topic 2.- Algae. Vegetative and reproductive characteristics. Main groups. Ecology.

Topic 3.- Bryophytes. Vegetative and reproductive characteristics. Main groups. Ecology.

Topic 4.- The first vascular plants: Pteridophytes (ferns): Main characteristics and groups. Ecology.

Topic 5.- Spermatophytes. Gymnosperms. Main characteristics and groups. Reproductive structures.

Topic 6.- Cormophytes. The "cormo" concept. Morphology and structure of the standard cormo.

Topic 7.- Adaptative strategies of the vascular plants. Raunkiaer plant life-form and biological spectra.

Topic 8. Sistematic and Taxonomy. Organization levels. Main reproduction types in plants. Botany applications.

Topic 9.- Angiosperms. Main characteristics and groups. Reproductive structures. The flower and the fruit.

Polinization. Dispersion mechanisms of fruits.

Topic 10.- Angiosperms' clasification. Monocotyledoneae. Main families: general characteristics, representative examples and distribution.

Topic 11.- Dicotyledoneae. Main families: general characteristics, representative examples and distribution. Topic

12.- Distribution areas. Corology. Cosmopolitan areas and endemisms. Threatened flora and conservation

strategies: Botaical Garden. Biogeographical regions.

Topic 13.- Biogeographical regions and plant populations with a enviromental interest in Spain. The mediterranean forest and "dehesas" . Conifers. River forest. Mountain vegetation. Agroforest systems.

2. Practical contents

Laboratory:

1.- Talophytes and Fungi.

2 - Bryophytes and Ferns.

3.- Gimnosperms and visit to the University Forest.

4 to 8.-Angiosperms.

Field practical lessons:

9 y 10.- Sierra Morena.

11.- Botanical Garden of Córdoba.

Bibliography

1. Basic Bibliography

Devesa y Carrión (2012). Las plantas con flor. Apuntes sobre su origen, clasificación y diversidad. Publicaciones

Universidad de Córdoba.

Font-Quer (2009). Diccionario de Botánica. Ed. Península.

Izco, Barreno, Brugués, Costa, Devesa, Fernández, Gallardo, Llimona, Salvo, Talavera y Valdés (2004). Botánica .

Ed. McGraw-Hill- Interamericana.

Lüttge, Kluge & Bauer (1993). Botánica. Ed. Interamericana McGraw-Hill. Nabors, M. (2006). Introducción a la

Botánica. Ed. Addison-Wesley.

Pineda, de Miguel, Casado y Montalvo editores (2002). La Diversidad Biológica de España. Ed. Prentice Hall-

Pearson Education.

Raven, Evert & Eichhorn (1992). *Biología de las Plantas*. Vol. 1 y 2. Ed. Reverté.

2. Bibliography for practical lessons.

Aira, M.J., Vázquez, R.A. & Izco, J. (2014) *Manual de prácticas de Botánica*. Laboratorio y campo. USC Editora.

Cabeza (2010). *Morfología vegetal*. Ed. Universitat. García-Guardia (1988). *Flora Silvestre de Andalucía*. Ed.

Moreno, Jiménez, Gómez e Infante (1996). *Setas de Andalucía*. Con especial referencia a sus parques naturales. Ed.

Centro Andaluz del Libro. Salvo (1990). *Guía de Helechos*. Ed. Pirámide. Valdés, Talavera y Fernández-Galiano

editores (1987). *Flora Vasculare de Andalucía Occidental*. Ed. Ketres Wirth, V. & Düll, R. (2004) *Guía de Campo de*

Líquenes, Musgos y Hepáticas. Ed. Omega.

3. Bibliografía complementaria.

Blanca (2001). *Flora amenazada endémica de Sierra Nevada*. Conserjería de Medio

Ambiente Junta de Andalucía. http://ahim.files.wordpress.com/2009/08/flora_amenazada_endemica_sierra_nevada_2001.pdf

Blanca, Cabezudo, Hernández-Bermejo,

Herrera, Muñoz y Valdés (2000). *Libro Rojo de la Flora Silvestre*. Amenazada de Andalucía. Consejería de Medio

Ambiente. Junta de Andalucía.

Bañares, Blanca, Güemes, Moreno y Ortiz (2004). *Atlas y Libro Rojo de la Flora*

Vascular Amenazada de España. Ministerio de Medio Ambiente.

Delibes de Castro (2001). *La Naturaleza en Peligro*. Ed. Temas de Hoy. Pascual (2001). *La Vida Amenazada*:

Cuestiones Sobre La Biodiversidad. Ed. Nivel.

Schulze & Mooney editores (1994). *Biodiversity And Ecosystem Function*. Ed. Springer-Verlag.

Methodology

General clarifications on the methodology (optional)

The students will be provided with the guides and keys to follow the classes. There are interactive guides for

identification designed by the teacher and available on the Moodle page. All the material they will be facilitated

through the Moodle page

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

Clarifications on the methodology for part-time students and students with disabilities and special educational

needs:

-The field practices that will be optional for both students. They can choose the group of practices that better fit

with their necessities.

- For part-time students, adaptations will be decided in meetings between the teaching staff and the students concerned. They can attend to the group of practical lessons that better they can attend.
- For students with special necessities or disabilities methodological adaptations for part-time students will be decided in meetings between the teaching staff and the students concerned in order to personalise the possible cases that may arise. The teacher will meet with the pupils affected to establish the most appropriate adaptations for each particular case, following the indications of the report issued by the Inclusive Education Unit of UCO..

Face-to-face activities

Activity	Large group	Medium group	Total
<i>Field trips</i>	-	4	4
<i>Projects based on the course contents</i>	30	18	48
<i>Tutorial action activities</i>	-	2	2
<i>Written expression activities</i>	3	3	6
Total hours:	33	27	60

Off-site activities

Activity	Total
<i>Exercise and problem solving activities</i>	10
<i>Information processing activities</i>	60
<i>Information search activities</i>	20
Total hours	90

Results of the training and learning process

Knowledge, competencies and skills

- CB5 Capable of integrating the experimental evidence found in field and/or laboratory studies with theoretical knowledge.
- CE11 Capable of interpreting the biodiversity of the natural environment, the structure, physiology and features of living organisms and the concepts of evolution, taxonomy and development.
- CE13 Capable of identifying animal and plant species as part of the natural resources of our country, and their adaptation and conservation.
- CE23 Be able to elaborate, manage and implement environmental plans and/or projects.

Assessment methods and instruments

Intended learning outcomes	Examination	Group or individual globalizing projects	Students assignments
CB5	X	X	X
CE11	X	X	X
CE13	X	X	X
CE23		X	
Total (100%)	70%	20%	10%
Minimum grade (*)	5	5	5

(*)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:

General clarifications on instruments for evaluation: theoretical exam 70%, practical exam 20%, herbarium 10%.

The practical exam will be a "de visu" exam of plants. Students can use the botanical keys used in the lessons.

The Herbarium will be evaluated regarding quality of systematic determination and presentation. Some questions will be made about the way of elaboration and the plants included.

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

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

- For part-time students, adaptations will be decided in meetings between the teaching staff and the students concerned. They can attend to the group exam that better they can attend.
- For students with special necessities or disabilities methodological adaptations for part-time students will be decided in meetings between the teaching staff and the students concerned in order to personalise the possible cases that may arise. The teacher will meet with the pupils affected to establish the most appropriate adaptations for each particular case, following the indications of the report issued by the Inclusive Education Unit of UCO..

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

Marks of the different parts will be saved for the next 2 courses.

Qualifying criteria for obtaining honors:

Los establecidos por la normativa de la UCO. Nota mínima 9.

Sustainable development goals

Good health and well-being

Quality education

Clean water and sanitation

Climate action

Life below water

Life on land

Other Faculty

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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).
