



Landscape Restoration (F. Ciencias)

Guía docente 2023-24

INTRODUCTION

Course description: This course will explore different perspectives and techniques for mitigating environmental impacts of human activities. We will take a close look at the concept of landscape restoration, we will think about why and when restoration activities must be applied, we will learn the basics of restoration project planning, and we will analyze real cases.

- **Degree:** Double degree Biology + Environmental sciences
- **Module in the Degree Program:** Module IV. Land zoning and conservation.
- **ECTS:** 6
- **Year, semester:** 4th year, 2nd semester
- **Type of course:** required
- **Instructor:** to be determined
- **Language:** English and Spanish
- **Room, Schedule:** room 15, Mondays and Wednesdays 16.00 to 18.00

COMPETENCES

Basic competences

CB3. To be able to gather and interpret relevant data (usually within the field of study) to build opinions that show reflection on relevant social, scientific or ethical issues.

CB4. To be able to communicate information, ideas and answer questions to specialist and non-specialist audiences.

CB5. To develop the abilities to undertake future studies on an autonomous manner.

Generic competences

CG2. To think on an integrated way and to tackle problems from different points of view.

CG3. To have critical sense.

CG4. To work as part of a team.

CG5. To have a sense of responsibility towards the environment and the ecosystem.

CG6. To manage information.

Specific competences

CE14. To elaborate management plans for plant and animal populations (including threatened and endangered species).

CE32. To design sustainability indicators and calculate environmental footprint.

CE34. To know the principles and techniques of environmental restoration and rehabilitation.



SYLLABUS

- Fundamentals of Landscape Restoration
 - About the landscape
 - Basic concepts: remembering EIA
 - Landscape assessment
 - Nature, landscape, and human wellbeing
 - Introduction to landscape restoration
 - A general view
 - Ecological basics and restoration trajectories
 - Goals and perspectives on landscape restoration
 - Land vocation
- The restoration project
 - Geomorphology
 - Soil
 - Revegetation
 - Fauna
 - Society
 - Follow-up
- Project: a proposal to restore an area of the campus of the University of Navarra

EDUCATIONAL ACTIVITIES

Activities	Methodology	Correspondence to competences
Theoretical lectures - 0,96 ECTS (24h)	Lectures in the room. Student participation is highly encouraged and valued	CB3, CB5, CG2, CG3, CG5, CG6, CE14, CE32, CE34
Applied sessions - 0,56 ECTS (14h)	Practical sessions to apply theoretical knowledge to the course project	CB3, CB4, CB5, CG4, CG6, CE14, CE34
Assessment seminars - 0,16 ECTS (4h)	Public defense and self-assessment of the course final project. Experts from different affiliations may join some of the sessions	CB4, CG3, CG4
Field trips - 0,24 ECTS (6h)	Visits to restoration projects in nearby places	CG3, CG5, CE5
Course project - 1,72 ECTS (43h)	Individual and team work that applies the contents of the course	CB3, CB4, CB5, CG2, CG3, CG4, CG6, CE5, CE14, CE32



One-to-one tutorials - 0,2 ECTS (5h)	Personal interviews with the teachers to get help with personal learning and to solve questions	CG3, CG6
Personal study - 0,66 ECTS (16,5h)	Time dedicated to understand and assimilate concepts discussed in class	CB3, CB5, CG2, CG3, CG6, CE5, CE34
Environment and Landscapes Program - 1,5 ECTS (37,5h)	National and international trips to study restoration projects	CB3, CG2, CG3, CG4, CG5, CE5, CE34
Total dedication:	6 ECTS (150h)	

GRADING

REGULAR CALL (MAY)

Criteria:

1. Students will work on a course project during the whole semester. It will include individual and teamwork, and a public defense at the end of the course. The grade of the project will represent 50% of the final grade of the course.
2. Each student will build a personal workbook throughout the course by making different individual assignments. It will be evaluated and will represent 25% of the final grade.
3. The final exam will represent 25% of the final grade.

Submitting all parts (project, individual assignments, and exam) is mandatory to pass the course.

A proactive attitude during the sessions may rise the final grade up to one point.

SECOND CALL (JUNE)

Only the final exam can be repeated in June. In extraordinary cases, there might exist the possibility of a second attempt at some of the individual assignments.

OFFICE HOURS

Please ask for an appointment by email (avillarroya@unav.es)

BIBLIOGRAPHY AND RESOURCES



Universidad de Navarra

Textbooks

GÓMEZ OREA, Domingo, 2004. Recuperación de espacios degradados. Ediciones Mundiprensa. [Localízalo en la Biblioteca](#)

LEOPOLD, Aldo, 2005. *Una ética de la Tierra*. Edición de Jorge Riechmann. Colección clásicos del pensamiento crítico. Catarata. [Localízalo en la Biblioteca](#)

LEOPOLD, Aldo, 1949. A *Sand County Almanac*, en C. MEINE (Ed.), Aldo Leopold. [A Sand County Almanac and other Writings on Ecology and Conservation](#). (ed. 2013). New York, Library of America, 3-83.

SORIA, Carlos. 2021. *El Campus de la Universidad de Navarra*. Pamplona, Eunsa. [Localízalo en la Biblioteca](#)

Reports

CHELMSFORD CITY COUNCIL (2017). *Landscape Sensitivity and Capacity Assessment*. URL: https://www.chelmsford.gov.uk/_resources/assets/attachment/full/0/72988.pdf

IPBES (2018): The IPBES assessment report on land degradation and restoration. Montanarella, L., Scholes, R., and Brainich, A. (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 744 pages. <https://doi.org/10.5281/zenodo.3237392>

SER (2004). International Primer on ecological restoration. https://www.ser.org/resource/resmgr/custompages/publications/SER_Primer/ser_primer.pdf

SER (2019). International Principles and Standards for the practice of ecological restoration. 2nd Edition. [SER2019_international_standards_.pdf](#)

SWANWICK, C. (2002). *Landscape Character Assessment: guidance for England and Scotland*. URL: <https://www.nature.scot/sites/default/files/2018-02/Publication%202002%20-%20Landscape%20Character%20Assessment%20guidance%20for%20England%20and%20Scotland.pdf>

TUDOR, C. (2014). *An approach to Landscape Character Assessment*. URL: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/691184/landscape-character-assessment.pdf

Papers

Montanarella L. et al. (2016) World's soils are under threat. *SOIL* 2: 79-82. <https://doi.org/10.5194/soil-2-79-2016>

Websites

Paisaje en Navarra: <https://paisaje.navarra.es/>

Other

AUGÉ, Marc, 2005. *Los "no-lugares". Espacios del anonimato. Una antropología de la sobremodernidad*. Gedisa, Barcelona. [Localízalo en la Biblioteca](#)



Universidad de Navarra

BERQUE, Augustin, 2009. *El pensamiento paisajero*. Edición de Javier Maderuelo. Paisaje y Teoría. Biblioteca Nueva. [Localízalo en la Biblioteca](#)

CARERI, Francesco, 2002. *Walkscapes. El andar como práctica estética*. GG, Barcelona. [Localízalo en la Biblioteca](#)

CARERI, Francesco, 2016. *Pasear, detenerse*, GG, Barcelona. [Localízalo en la Biblioteca](#)

CARSON, Rachel, 1962. *Silent spring*. Houghton Mifflin Company. [Localízalo en la Biblioteca](#)

CARSON, Rachel, 1965. *The sense of wonder*. Harper & Row. [Localízalo en la Biblioteca](#)

FALCÓN, Antoni, 2007. *Espacios verdes para una ciudad sostenible. Planificación, proyecto, mantenimiento y gestión*. GG. [Localízalo en la Biblioteca](#)

GALÍ, Teresa, 2006. *Los mismos paisajes*. GG, Barcelona. [Localízalo en la Biblioteca](#)

GIL ALBERT, Fernando, 2005. *Manual Técnico de Jardinería. Tomo I Establecimiento y Tomo II Mantenimiento*, Ediciones Mundi prensa. [Localízalo en la Biblioteca I](#) y [Localízalo en la Biblioteca II](#)

HOUGH, Michael, 1995. *Planificación urbana y procesos ecológicos*. GG, Barcelona. [Localízalo en la Biblioteca](#)

JELLICOE, Geoffrey, 1995. *The landscape of man*. Thames and Hudson, Londres. [Localízalo en la Biblioteca](#)

MARTÍNEZ DE PISÓN Eduardo, 1998. *El concepto de paisaje como instrumento de conocimiento ambiental*, Martinez de Pisón, E (ed) Paisaje y Medio Ambiente Universidad de Valladolid; pp.9-28

MILANI, Raffaele, 2009. *El arte del paisaje*. Edición de Federico López Silvestre. 2007. Paisaje y Teoría. Biblioteca Nueva. [Localízalo en la Biblioteca](#)

NAVÉS, Francesc, PUJOL Joan, ARGIMON Xavier, SAMPERE Lali, 1995. *El árbol en jardinería y paisajismo*, Ed. Omega. [Localízalo en la Biblioteca](#)

NTJ, *Normas tecnológicas de jardinería y paisajismo*, Colegio Oficial de Ingenieros Técnicos Agrícolas de Cataluña. [Localízalo en la Biblioteca](#)

ROSELL, Quim, 2001. *Rehacer paisajes*. GG, Barcelona.

TIBERGHIEN, Gilles A., 1995. *Land art*. Carré, Paris. [Localízalo en la Biblioteca](#)