SUBJECT TEACHING GUIDE

679 - Soil Management

Master's Degree in Environmental Engineering and Management

Academic year 2023-2024

1. IDENTIFYING DATA				
Degree	Master's Degree in Environmental Engineering and Management		Type and Year	Compulsory. Year 1
Faculty	School of civil Engineering			
Discipline	Basis of Environmental Engineering			
Course unit title and code	679 - Soil Management			
Number of ECTS credits allocated	3	Term	Semester based (1)	
Web	https://egela.ehu.eus/			
Language of instruction	Spanish	English Friendly	Yes	Mode of delivery	Face-to-face

Department	DPTO. CIENCIAS Y TECNICAS DEL AGUA Y DEL MEDIO AMBIENTE
Name of lecturer	ANA LORENA ESTEBAN GARCIA
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Office	E.T.S. de Ingenieros de Caminos, Canales y Puertos. Planta: + 2. DESPACHO PROFESOR (2031)
Other lecturers	

3.1 LEARNING OUTCOMES
- Explain the importance of the "soil" environment from an ecological and socio-economic point of view.
- Describe the main physical, chemical and biological properties of soils, quantify them using parameters and know the methods for obtaining them.
- Describe the main systems and criteria for soil classification; classify a soil based on its properties.
- Describe the types of soil degradation, its causes and effects.
- Explain the tools for managing degraded soils.
- Become aware of the problem of soil degradation.

4. OBJECTIVES

Raise students' awareness of the importance of soil degradation and enhance their interest in this topic.
Provide students with knowledge about the properties of soils, the parameters that describe and quantify them, and the methods for obtaining them.
Offer students tools for the study, prevention and recovery of degraded soils mainly due to erosion and contamination.

6. COURSE ORGANIZATION

	CONTENTS
1	Introduction. Soil degradation.
2	Physical, chemical and biological properties of soils.
3	Types of soils.
4	Soil degradation by erosion.
5	Soil degradation due to pollution.

7. ASSESSMENT METHODS AND CRITERIA

Description	Type	Final Eval.	Reassessn	%
Individual works	Work	No	Yes	35,00
Group work	Work	Yes	No	20,00
Final evaluation	Written exam	Yes	Yes	40,00
Laboratory / visits / talks	Work	No	No	5,00
TOTAL				100,00

Observations
Attendance to class, intervention in the classroom and on the virtual teaching platform, the realization of proposed exercises, and other participation activities, may be valued by adding up to 0.5 points to the grade for the course, as long as the mark in the written examen is equal or higher than 4.0 (up to a maximum final grade of 10).

Observations for part-time students
If a student has applied for and obtained their enrollment in the master on a part-time basis, they may have access to the single evaluation modality. The single evaluation will consist of a final evaluation (written exam) that will score 50% of the grade and the delivery of individual works with a weight of 50%. When oral presentation is required, it can be done by videoconference.   In addition, unless justified, they must attend the Laboratory Practice session and/or visits, and submit a report on it. Like full-time students, they will have access to all the documentation of the subject through a virtual teaching platform.

8. BIBLIOGRAPHY AND TEACHING MATERIALS

BASIC
APUNTES DE LA ASIGNATURA "GESTIÓN DE SUELOS".
PORTA, J., LÓPEZ-ACEVEDO, M., ROQUERO, C. (2003) Edafología para la agricultura y el medio ambiente. Ed. Mundi-Prensa. 3ª edición. ISBN: 84-7114-784-X. En papel: http://catalogo.unican.es/cgi-bin/abnetopac/?TITN=209218 Electrónico: http://catalogo.unican.es/cgi-bin/abnetopac/?TITN=437558
BRADY, N.C. Y WEIL, R.R. (2008) The nature and properties of soils. Prentice Hall. 14ª edition. ISBN: 978-01-3227-938-3. http://catalogo.unican.es/cgi-bin/abnetopac/?TITN=274673
JIMÉNEZ, R. (2017) Introducción a la contaminación de suelos. Ed. Mundi-Prensa. http://catalogo.unican.es/cgi-bin/abnetopac/?TITN=423763