



Teaching Guide

Identifying Data					2024/25
Subject (*)	Surface Water Assessment		Code	632549015	
Study programme	Máster Universitario en Xestión Sostible da Auga				
Descriptors					
Cycle	Period	Year	Type	Credits	
Official Master's Degree	2nd four-month period	First	Obligatory	3	
Language	Spanish				
Teaching method	Face-to-face				
Prerequisites					
Department	Enxeñaría Civil				
Coordinador	Barrientos Rodríguez, Victor	E-mail	victor.barrientos@udc.es		
Lecturers	Barrientos Rodríguez, Victor Soriano Hoyuelos, Gemma	E-mail	victor.barrientos@udc.es gemma.soriano@udc.es		
Web					
General description	Materia destinada a conocer y entender las Directivas nacionales y europeas relacionadas con estas masas de agua, así como conocer su origen, evaluación y parámetros ecológicos que determinan su estado.				

Study programme competences / results

Code	Study programme competences / results
A1	CON1 Describe the principles, concepts, and dimensions that encompass integrated water resources management and its role as a key tool for achieving water security and advancing the associated Sustainable Development Goals (SDGs). Identify problems related to water development, use, and access. Identify and compare water legislation at the European, national, regional, and local levels, as well as interpret conceptual frameworks on sustainable development and their application to the water sector, with a specific focus on the SDGs. Provide tools to explain the economics of water. Enumerate aspects of public taxation that may be relevant in water management.
A5	CON5 Describe the fundamentals of water resources assessment and the main tools for hydrological planning, based on the Water Framework Directive, legislation, and global frameworks for water resource allocation, including the environmental component. Demonstrate that ecosystem services linked to water have high added value and that nature-based solutions enable a sustainable approach to water resource management.
B1	HAB1 Use and compare water legislation and conceptual frameworks related to sustainable development. Operate with tools that allow estimating economic variables (macro and micro) related to water, and employ the tools to apply appropriate taxation and cost policies to water
B4	HAB4 Analyze the European Union's Water Framework Directive and Floods Directive, their technical implications, and their implementation through hydrological planning. Utilize computer tools for problem-solving related to water management within the framework of both directives. Develop measurements and analysis of hydrologically relevant data and data related to the state of water bodies. Evaluate the effect of urban use on the watershed and analyze the consequences of discharging water (treated or untreated) into receiving water bodies. Additionally, develop strategies to protect areas of surface water and groundwater generation within watersheds, based on the principle of recognizing and enhancing ecosystem services.
C4	COM4 Integrate the various sources that generate the water supply and the uses that create the demand into systems or balances that allow for proper management. Plan the water resource at both macro and micro scales, allocating water to different uses while integrating environmental and social demands

Learning outcomes

Learning outcomes	Study programme competences / results		
Descreeber os principios, conceptos e dimensións que comprende a xestión integrada dos recursos hídricos e o seu papel como ferramenta clave para acadar a seguridade hídrica e avanzar na consecución dos ODS asociados.	AJ1		
	AJ5		



		BJ1	
		BJ4	
			CJ4

Contents	
Topic	Sub-topic
INTRODUCCION ? Fundamentos ? Marco normativo ? Conceptos básicos	
METODOLOGÍA DE LA DETERMINACIÓN DEL ESTADO ECOLÓGICO DE LAS AGUAS 1. Estado ecológico ? Tipos de indicadores ? Físico-químicos ? Biológicos ? Hidromorfológicos 2. Estado químicos Parámetros	
DEFINICIÓN DE ZONAS 1. Clasificación 2. Espacios protegidos	
SEGUIMIENTO Y EVALUACIÓN DEL RIESGO 1. Programas 2. Control de vigilancia 3. Control operativo 4. Control de investigación 5. Criterios de diseño e implantación 6. Casos	

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Supervised projects	A1 A5 B1 B4 C4	2	9	11
Mixed objective/subjective test	A1 A5 B1 B4 C4	2	9	11
Directed discussion	A1 A5 B1 B4 C4	1	4	5
Guest lecture / keynote speech	A1 A5 B4 C4	16	32	48
Personalized attention		0	0	0

(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
Methodologies	Description
Supervised projects	Ejemplo de caso práctico
Mixed objective/subjective test	Posibilidad de hacer alguna evaluación continua
Directed discussion	Tema de debate a proposición del docente



Guest lecture / keynote speech	Sesión explicativa
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Personalized attention

Methodologies	Description
Supervised projects	Se desenvolverán tutorías a disposición do alumnado

Assessment

Methodologies	Competencies / Results	Description	Qualification
Supervised projects	A1 A5 B1 B4 C4	Traballo según orientación docente	15
Mixed objective/subjective test	A1 A5 B1 B4 C4	Ejemplo de caso práctico	85

Assessment comments

Ejemplo de caso práctico

Sources of information

Basic	<ul style="list-style-type: none"> - (). . - (). . - (). . <p>Real Decreto 817/2015, de 11 de setembro 2015 Real Decreto 817/2015, de 11 de setembro 2011 Directive 2008/105/EC setting environmental quality standards in the field of water policy Real Decreto 817/2015, de 11 de setembro 2015 Real Decreto 817/2015, de 11 de setembro 2011 Directive 2008/105/EC setting environmental quality standards in the field of water policy</p>
Complementary	<p>https://www.miteco.gob.es/es/agua/legislacion/Marco_normativo_planificacion.aspx https://www.miteco.gob.es/es/agua/temas/estado-y-calidad-de-las-aguas/aguas-superficiales/categorias-y-tipos-de-masas-de-agua/GUÍA PARA LA EVALUACIÓN DEL ESTADO DE LAS AGUAS SUPERFICIALES Y SUBTERRÁNEAS MINECO 2021</p>

Recommendations

Subjects that it is recommended to have taken before

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Subjects that are recommended to be taken simultaneously

Biological Assessment of Water Quality/632549024
Water, Sustainability and Common Good/632549001

Subjects that continue the syllabus

Hydrological Basins Monitoring for the Tracking of Water Masses/632549023
Limnology/632549021

Other comments

"-Segundo se recolle nas distintas normativas de aplicación para a docencia universitaria deberase incorporar a perspectiva de xénero nesta materia (usarase linguaxe non sexista, utilizarase bibliografía de autores/as de ambos sexos, propiciarse a intervención en clase de alumnos e alumnas...)-Traballarase para identificar e modificar prexuízos e actitudes sexistas e influirase na contorna para modificalos e fomentar valores de respecto e igualdade.-Deberanse detectar situacións de discriminación por razón de xénero e proporanse accións e medidas para corrixilas."

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.