



Teaching Guide				
Identifying Data				2023/24
Subject (*)	Ecosystemic Services and Ecohydraulics		Code	632549022
Study programme	Máster Universitario en Xestión Sostible da Auga			
Descriptors				
Cycle	Period	Year	Type	Credits
Official Master's Degree	2nd four-month period	First	Optional	3
Language				
Teaching method	Face-to-face			
Prerequisites				
Department	Enxeñaría Civil			
Coordinador	Vázquez González, Ana María	E-mail	ana.maria.vazquez@udc.es	
Lecturers	Pena Mosquera, Luis Vázquez González, Ana María	E-mail	luis.pena@udc.es ana.maria.vazquez@udc.es	
Web				
General description				

Study programme competences	
Code	Study programme competences
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.
A3	CON3 Explain the foundations of chemistry, biology, and morphology of continental aquatic ecosystems. Provide the common methodology of the EU for assessing the status of water bodies and its adaptation to different territorial contexts. Identify models for assessing pressures and impacts on water bodies, understanding their opportunities and limitations. Suggest solutions for the maintenance and improvement of the status of water bodies across their different quality elements. Identify bioindicators.
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.
C1	COM1 Validate, evaluate, and adapt water legislation for a specific situation. Synthesize the economic variables involved in a problem related to water management. Adapt conceptual frameworks, particularly the Sustainable Development Goals (SDGs), to a specific problem
C5	COM5 Evaluate the impact of floods and droughts and propose strategies to mitigate them in accordance with legislation, applying new technologies. Propose sustainable and socially acceptable solutions.

Learning outcomes			
Learning outcomes			Study programme competences
			AJ1
			CJ1
			BJ4



		BJ1	
			CJ5
	AJ3		

Contents	
Topic	Sub-topic

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Field trip	B4 C5	4	0	4
Oral presentation	B1 C1	0.5	7	7.5
Short answer questions	A1 A3 B1 B4 C1 C5	1.5	10	11.5
Supervised projects	A1 A3 B1 B4 C1 C5	1	9	10
Guest lecture / keynote speech	A1 A3	14	28	42
Personalized attention		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
Field trip	
Oral presentation	
Short answer questions	
Supervised projects	
Guest lecture / keynote speech	

Personalized attention	
Methodologies	Description
Short answer questions	
Supervised projects	
Guest lecture / keynote speech	
Oral presentation	

Assessment			
Methodologies	Competencies	Description	Qualification
Short answer questions	A1 A3 B1 B4 C1 C5	O alumnado terá que resolver varias probas de resposta breve coas que o profesorado poderá avaliar os coñecementos adquiridos	40
Supervised projects	A1 A3 B1 B4 C1 C5	O alumnado terá que elaborar 2 traballo sobre a docencia impartida que serán expostos na clase para o resto do alumnado e profesorado	40
Oral presentation	B1 C1	El alumnado presentará na clase, os traballos tutelados elaborados	20



Assessment comments

Sources of information				
<table border="1"><thead><tr><th>Basic</th><td>Clay, C.H. (1995). Design of fishways and other fish facilities. Lewis Publisher, Boca Raton, Florida. Larinier, M., Porcher, J.P., Travede, F., Gosset, C. (1998). Passes à poissons. Expertise conception des ouvrages de franchissement. Conseil Supérieur De La Pêche, Paris. France Congress, August, 2003. Theme C. p 425-432. Thessaloniki. Greece. Odeh, M. (1999). Innovations in fish passage technology. American fisheries Society, Bethesda, Maryland.</td></tr><tr><th>Complementary</th><td> </td></tr></thead></table>	Basic	Clay, C.H. (1995). Design of fishways and other fish facilities. Lewis Publisher, Boca Raton, Florida. Larinier, M., Porcher, J.P., Travede, F., Gosset, C. (1998). Passes à poissons. Expertise conception des ouvrages de franchissement. Conseil Supérieur De La Pêche, Paris. France Congress, August, 2003. Theme C. p 425-432. Thessaloniki. Greece. Odeh, M. (1999). Innovations in fish passage technology. American fisheries Society, Bethesda, Maryland.	Complementary	
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Complementary				

Recommendations
<b>Subjects that it is recommended to have taken before</b>
<b>Subjects that are recommended to be taken simultaneously</b>
<b>Subjects that continue the syllabus</b>
<b>Other comments</b>

(\*)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.