



## Teaching Guide

Identifying Data					2021/22
Subject (*)	Water quality and facilities	Code	610489107		
Study programme	Mestrado Universitario en Acuicultura (Plan 2018)				
Descriptors					
Cycle	Period	Year	Type	Credits	
Official Master's Degree	1st four-month period	First	Obligatory	3	
Language					
Teaching method	Face-to-face				
Prerequisites					
Department	BiologíaDepartamento profesorado másterQuímica				
Coordinador	Cremades Ugarte, Javier	E-mail	javier.cremades@udc.es		
Lecturers	Cremades Ugarte, Javier	E-mail	javier.cremades@udc.es		
Web	<a href="http://www.usc.es/posgrao/macucg/2011_act/es/intro.php">http://www.usc.es/posgrao/macucg/2011_act/es/intro.php</a>				
General description					
Contingency plan	<p>1. Modifications to the contents</p> <p>2. Methodologies</p> <p>*Teaching methodologies that are maintained</p> <p>*Teaching methodologies that are modified</p> <p>3. Mechanisms for personalized attention to students</p> <p>4. Modifications in the evaluation</p> <p>*Evaluation observations:</p> <p>5. Modifications to the bibliography or webgraphy</p>				

## Study programme competences / results

Code	Study programme competences / results

## Learning outcomes

Learning outcomes	Study programme competences / results

## Contents

Topic	Sub-topic
Indicadores de calidade.	
Biofiltración	Nitrificación, desnitrificación.
Desinfección	Conceptos básicos. Métodos de desinfección.
Instalacións e Enxeñería en Acuicultura.	
Tipos de Instalacións ou Sistemas de Cultivo.	
Compoñentes técnicos dunha planta acuícola.	
Unidades de produción pechadas e Gaiolas mariñas.	

## Planning

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Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student?s personal work hours	Total hours
Guest lecture / keynote speech		12	36	48
Seminar		5	11	16
Laboratory practice		4	2	6
Mixed objective/subjective test		1.5	0.5	2
Personalized attention		3	0	3

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

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	Nas clases presenciais exporáanse os fundamentos teóricos da materia e estableceranse os criterios para que o alumno desenvolva os conceptos básicos mediante lecturas e traballos. Nas devanditas clases buscarase a interacción entre os profesores e os alumnos.
Seminar	Nos seminarios preténdese incidir na aplicación dos conceptos teóricos.
Laboratory practice	Nas prácticas realizarase unha visita técnica a unha instalación de produción acuícola ou de tratamento de auga, e caso de ser posible veráanse as metodoloxías de control da calidade da auga.
Mixed objective/subjective test	Ao final do curso, nas datas previstas para iso, realizarase unha proba escrita para valorar os coñecementos adquiridos polo alumno.

Personalized attention	
Methodologies	Description
Guest lecture / keynote speech	O profesor atenderá ao alumno na resolución das dúbidas que lle poidan xurdir. Levarase a cabo no horario de tutorías do que dispón o profesor.

Assessment			
Methodologies	Competencies / Results	Description	Qualification

Assessment comments

Sources of information	
<b>Basic</b>	<ul style="list-style-type: none"> <li>- Alley (2007). Water Quality Control Handbook. McGraw-Hill Professional</li> <li>- Barnabe, G. et al. (2000). Ecology and Management of Coastal Waters: The Aquatic Environment. Springer Praxis Books</li> <li>- Beaz Paleo, J.M. (2007). Ingeniería de la Acuicultura Marina. Instalaciones en tierra. . Observatorio Español de Acuicultura, CSIC</li> <li>- Beaz Paleo, J.M. (2008). Ingeniería de la Acuicultura Marina. Instalaciones de peces en el mar. Observatorio Español de Acuicultura, CSIC</li> <li>- Metcalf-Eddy (1995). Ingeniería de aguas residuales. Tratamiento, vertido y reutilización. McGraw-Hill</li> <li>- Murdock (1993). Fundamental Fluid Mechanics for the Practicing Engineer. CRC</li> <li>- O.-I. Lekang (2007). Aquaculture Engineering. Blackwell</li> <li>- Sánchez-Juny, M. E. Bladé, J. Puertas (2007). Hidráulica. Universidade de A Coruña</li> <li>- Yoo and Boyd (1994). Hydrology and Water Supply for Pond Aquaculture. Springer</li> </ul>
<b>Complementary</b>	<ul style="list-style-type: none"> <li>- American Water Works Association (2003). Calidad y tratamiento del agua. Mac Graw Hill, Madrid.</li> <li>- AENOR (1999). Calidad del agua. AENOR. Madrid.</li> </ul>



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

(\*)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.