



Teaching Guide				
Identifying Data				2017/18
Subject (*)	Marine energy resources	Code	730G05040	
Study programme	Grao en Enxeñaría Naval e Oceánica			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	2nd four-month period	Fourth	Optativa	4.5
Language	Spanish			
Teaching method	Face-to-face			
Prerequisites				
Department	Enxeñaría Naval e Industrial			
Coordinador	Díaz Casás, Vicente	E-mail	vicente.diaz.casas@udc.es	
Lecturers	Díaz Casás, Vicente	E-mail	vicente.diaz.casas@udc.es	
Web				
General description	Abordaranse os principais aspectos do deseño de instalacións para o aproveitamento dos recursos enerxéticos mariños.			

Study programme competences / results	
Code	Study programme competences / results
B1	That the students proved to have and to understand knowledge in an area of study what part of the base of the secondary education, and itself tends to find to a level that, although it leans in advanced text books, it includes also some aspects that knowledge implicates proceeding from the vanguard of its field of study
B2	That the students know how to apply its knowledge to its work or vocation in a professional way and possess the competences that tend to prove itself by the elaboration and defense of arguments and the resolution of problems in its area of study
B3	That the students have the ability to bring together and to interpret relevant data (normally in its area of study) to emit judgments that include a reflection on relevant subjects of social, scientific or ethical kind
B4	That the students can transmit information, ideas, problems and solutions to a public as much specialized as not specialized
B5	That the students developed those skills of learning necessary to start subsequent studies with a high degree of autonomy
B6	Be able to carrying out a critical analysis, evaluation and synthesis of new and complex ideas.
C1	Using the basic tools of the technologies of the information and the communications (TIC) necessary for the exercise of its profession and for the learning throughout its life.
C2	Coming across for the exercise of a, cultivated open citizenship, awkward, democratic and supportive criticism, capable of analyzing the reality, diagnosing problems, formulating and implanting solutions based on the knowledge and orientated to the common good.
C4	Recognizing critically the knowledge, the technology and the available information to solve the problems that they must face.
C5	Assuming the importance of the learning as professional and as citizen throughout the life.
C6	Recognizing the importance that has the research, the innovation and the technological development in the socioeconomic and cultural advance of the society.
C7	Capacidade de traballar nun ámbito multilingüe e multidisciplinar.

Learning outcomes		
Learning outcomes	Study programme competences / results	
Desenvolvemento e elaboración de proxectos conceptuais no eido da explotación de recursos mariños	B1	C1
	B2	C2
	B3	C4
	B4	C5
	B5	C6
	B6	C7



Coñecemento de compoñentes, equipos e sistemas para instalacións de xeración de enerxías renovables mariñas	B1	C1
	B2	C2
	B3	C4
	B4	C5
	B5	C6
	B6	C7

Contents	
Topic	Sub-topic
Os seguintes bloques ou temas desenvolven os contidos definidos na guía do informe de verificación	Coñecemento de varios artefactos, fixa e variable, para a produción de enerxía renovable a partir de: vento, ondas, marea, outras fontes mariñas. Consideracións de comportamento, eficiencia, viabilidade e impacto ambiental. Regulamentos e normativas específicas
Bloque I: Sistemas de xeración de enerxías renovables mariñas	Tema 1: Contextualización Tema 2: Clasificación das enerxías renovables mariñas Tema 3: Compoñentes do sistema de enerxía renovable mariña Tema 4: Compoñentes do parque de enerxía renovable mariña
Bloque II: Lexislación / Regras de clasificación de enerxías renovables mariñas	Tema 5: Lexislación enerxética das enerxías renovables mariñas Tema 6: Sociedades de Clasificación
Bloque III: Cargas ambientais	Tema 7: Caracterización da contorna mariña Tema 8: Cargas ambientais (vento, ondas, correntes)
Bloque IV: Deseño do dispositivo	Tema 9: Caracterización enerxética Tema 10: Compoñentes do conversor

Planning				
Methodologies / tests	Competencies / Results	Teaching hours (in-person & virtual)	Student's personal work hours	Total hours
Guest lecture / keynote speech	C7 C6	20.5	2	22.5
Case study	B1 B2 B3 B4 B5 B6 C1 C2 C4 C5 C6 C7	3.5	11.5	15
Supervised projects	B1 B2 B3 B4 B5 B6 C1 C2 C4 C5 C6 C7	7.5	65.5	73
Personalized attention		2	0	2

(*)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	Desenvolvemento dos conceptos básico analizados na materia
Case study	Resolución de casos tipo propios da materia
Supervised projects	Elaboración dun proxecto conceptual nalgún dos campos dos sistemas analizados na materia

Personalized attention	
Methodologies	Description
Supervised projects	Resolución das dificultades ou dúbidas relativas ao desenvolvemento do traballo tutelado.

Assessment



Methodologies	Competencies / Results	Description	Qualification
Supervised projects	B1 B2 B3 B4 B5 B6 C1 C2 C4 C5 C6 C7	Elaboración dun proxecto conceptual nalgún dos campos dos sistemas analizados na materia	80
Case study	B1 B2 B3 B4 B5 B6 C1 C2 C4 C5 C6 C7	Realización de casos tipo / problemas relativos ao contido da materia	20

Assessment comments

Para a avaliación na segunda oportunidade ou adiantada o estudantado terá que volver a entregar os estudos de casos e traballos tutelados explicado no desenvolvemento da materia.

Sources of information

Basic

- Ben C. Gerwick (2007). Construction of marine and offshore structures. CRC Press
- Twidell, John. (2009). Offshore wind power . Multi-Science Pub. Co.

Complementary

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.