UNIVERSIDADE DA CORUÑA

| Teaching Guide | | | |
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| **Identifying Data** | | | **2022/23** |
| **Subject (\*)** | Energy, Cooperation and Sustainability | **Code** | 730547015d |
| **Study programme** | Máster Universitario en Eficiencia Enerxética e Sustentabilidade (a distancia) | | |
| **Descriptors** | | | |

| Cycle | Period | Year | Type | Credits |
|---|---|---|---|---|
| Official Master's Degree | 2nd four-month period | First | Optional | 3 |

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| **Language** | SpanishGalician |
| **Teaching method** | Non-attendance |
| **Prerequisites** | |
| **Department** | Enxeñaría Industrial |
| **Coordinador** | Rodríguez Gómez, Benigno Antonio |
| **Lecturers** | Rodríguez Gómez, Benigno Antonio |
| **Web** | |
| **General description** | |

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|---|---|
| **E-mail** | benigno.rodriguez@udc.es |
| **E-mail** | benigno.rodriguez@udc.es |

| Study programme competences / results | |
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| **Code** | **Study programme competences / results** |
| A13 | CE13 - Analyze, apply and optimize energy use systems |
| B1 | CB6 - Possess and understand knowledge that provides a foundation or opportunity to be original in the development and/or application of ideas, often in a research context |
| B2 | CB7 - That students know how to apply the knowledge acquired and their ability to solve problems in new or little-known environments within broader (or multidisciplinary) contexts related to their area of study |
| B3 | CB8 - That students are able to integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments |
| B4 | CB9 - That students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way |
| B5 | CB10 - That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous |
| B6 | CG1 - Search and select alternatives considering the best possible solutions |
| B7 | CG2 - Develop analysis and synthesis skills; encourage critical discussion, defending arguments, and drawing conclusions |
| B9 | CG4 - Extract, interpret and process information, from different sources, for use in the study and analysis |
| B10 | CG5 - Boost creativity |
| B16 | CG11 - Evaluate the application of emerging technologies in the field of energy and the environment |
| B18 | CG13 - Pose and solve problems, interpret a set of data and analyze the results obtained; in the field of energy efficiency and sustainability |
| C2 | CT2 - Master the oral and written expression and comprehension of a foreign language |
| C4 | CT4 - Develop for the exercise of a respectful citizenship with the democratic culture, human rights and the gender perspective |
| C5 | CT5 - Understand the importance of entrepreneurial culture and know the means available to entrepreneurs |

| Learning outcomes | |
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| **Learning outcomes** | **Study programme competences / results** |
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|---|---|---|---|
| The student will be able to assess and manage the Energy and Sustainability Indices | AC13 | BC1 | CC2 |
| | | BC2 | CC4 |
| | | BC3 | |
| | | BC6 | |
| | | BC9 | |
| | | BC16 | |
| | | BC18 | |
| The student will be able to find solutions for stable, accessible and environmentally acceptable energy systems | AC13 | BC2 | CC2 |
| | | BC7 | CC4 |
| | | BC10 | CC5 |
| The student will be able to propose cooperation projects for sustainable human development with the Logical Framework approach | | BC1 | CC2 |
| | | BC3 | CC4 |
| | | BC4 | CC5 |
| | | BC5 | |
| | | BC16 | |
| | | BC18 | |

| Contents | |
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| **Topic** | **Sub-topic** |
| Energy Sustainability | Energy Sustainability Sustainable Development Goals |
| | Life Cycle |
| | The role of Energy in the Circular Economy |
| Development cooperation. | Actors in the international development cooperation system. |
| | Human development and intervention strategies |
| Participation in development cooperation projects. | The instruments of international development cooperation |
| | Management of the cooperation action cycle |
| | The Logical Framework Approach |

| Planning | | | | |
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| **Methodologies / tests** | **Competencies / Results** | **Teaching hours (in-person & virtual)** | **Student?s personal work hours** | **Total hours** |
| Supervised projects | A13 B4 B6 B9 B10 B16 B18 C5 | 6 | 18 | 24 |
| Collaborative learning | B1 B3 B5 B7 B9 B10 B18 C5 | 6 | 6 | 12 |
| Document analysis | A13 B3 B5 B9 C4 C5 | 0 | 16 | 16 |
| Guest lecture / keynote speech | A13 B3 B6 C2 C4 | 5 | 10 | 15 |
| Panel discussion | B1 B2 B3 B5 B7 | 2 | 4 | 6 |
| 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** |
| Supervised projects | Supervised learning process aimed at helping students to work independently in a range of contexts. Focused primarily on learning ?how to do things? and on encouraging students to become responsible for their own learning. |
| Collaborative learning | Guided teaching-learning procedures (using ICT methods) based on organisation of class into small groups in which students work together to solve tasks assigned by teacher, with aim of optimising their learning experience and that of other members of group |

| Document analysis | Research skills development involving use of audiovisual and/or bibliographical documents (documentary or film extracts, news items, advertising images, photographs, articles, legal texts, etc.) relating to specific topic of study, with targeted analysis activities. Used as introduction to topic, as focus for case study, to explain abstract processes and present complex situations, or as strategy for synthesising content (theoretical and practical). |
|---|---|
| Guest lecture / keynote speech | Oral presentation (using audiovisual material and student interaction) designed to transmit knowledge and encourage learning. In the case of distance learning, this methodology can be applied synchronously, through videoconferencing, or asynchronously by recording classes and making them available on the network. |
| Panel discussion | Group dynamic technique in which students attend chaired debate among group of experts with different or opposing views on a particular subject. This methodology is applied through videoconferencing, in the case of distance learning,. |

| Personalized attention | |
|---|---|
| **Methodologies** | **Description** |
| Collaborative learning | The teacher guides the students in the preparation of a proposed topic so that the students can distribute the tasks necessary for the development of the topic. |

| Assessment | | | |
|---|---|---|---|
| **Methodologies** | **Competencies / Results** | **Description** | **Qualification** |
| Panel discussion | B1 B2 B3 B5 B7 | The following aspects will be assessed: Presence, intervention and active participation in the debate. Preparation of subsequent documents if requested to do so. | 20 |
| Supervised projects | A13 B4 B6 B9 B10 B16 B18 C5 | The elaboration process and the final result achieved will be assessed, taking into account the effort made and the final interest of the product achieved. | 30 |
| Collaborative learning | B1 B3 B5 B7 B9 B10 B18 C5 | Participation in the group and the result achieved will be assessed, which must be demonstrated by means of an exhibition or presentation of a document of an individual or joint nature. | 25 |
| Document analysis | A13 B3 B5 B9 C4 C5 | This activity can serve as a basis for both tutored work and collaborative learning. But it can also be independent of them. Students will be required to submit an individual work related to the sources analysed. | 25 |

| Assessment comments |
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| If for any reason it is not possible to carry out the Panel Discussion activity, its score will be transferred to the supervised work, in which case it may reach 50 points. |

In addition to the above, other means of assessment may be agreed upon on an individual basis, taking into account personal circumstances, if the parties consider this to be reasonable.

Consideration will also be given to the possibility of applying co-assessment and self-assessment strategies in the final grade of the course.

For students with recognition of part-time dedication and academic dispensation of exemption from attendance, second establishes the "NORMA QUE REGULA EI RÉGIMEN DE DEDICACIÓN AI ESTUDIO DE Los ESTUDIANTES DE GRADO Y MÁSTER UNIVERSITARIO EN LA UDC (*Arts. 2.3; 3.*b; 4.3 and 7.5) (04/05/2017):

 If these students can participate telematically in the classes of the course, the same evaluation procedure will be followed as for the rest of the students.

 In the case that the previous condition is not met, they will have to arrange regular tutorials with the teacher at the beginning of the course, to follow the development of the subject through the completion of assignments, and to plan their delivery and presentation.

 If they do not pass the course at the first opportunity, they will have to take an objective test at the second opportunity.

| Sources of information |
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| Basic | - Fernández Franco, Lorenzo y Román Marugán, Paloma  (2013). Manual de cooperación al desarrollo . Madrid:Síntesis<br>- Jonker Geral/ Jan Harmsen (2013). Ingeniería para la Sostenibilidad. Barcelona:Reverté<br>Aínda que a bibliografía poder ter un sentido orientador, durante o curso farase análise de fontes documentais suxeridas na aula que normalmente serán recursos da rede. |
|---|---|
| Complementary | |

| Recommendations |
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| **Subjects that it is recommended to have taken before** |
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| **Subjects that are recommended to be taken simultaneously** |
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| **Subjects that continue the syllabus** |
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| **Other comments** |
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- Fernández Franco, Lorenzo y Román Marugán, Paloma  (2013). Manual de cooperación al desarrollo . Madrid:Síntesis
- Jonker Geral/ Jan Harmsen (2013). Ingeniería para la Sostenibilidad. Barcelona:Reverté