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| Course Unit | Environmental Impact | | Field of study | Environment | |
| Bachelor in | Renewable Energy Engineering | | School | School of Technology and Management | |
| Academic Year | 2021/2022 | Year of study | 3 | Level | 1-3 |
| Type | Semestral | Semester | 2 | ECTS credits | 6.0 |
| | | | Code | 9910-743-3202-00-21 | |
| Workload (hours) | 162 | Contact hours | T 30 | TP 30 | PL 30 |
| | | | TC - | S - | E - |
| | | | OT - | O - | |

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Marina Maria Pedrosa Meca Ferreira Castro

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Learn the technical and legal process of environmental impact assessment. Learn methods of preparation and evaluation of environmental impact assessments.
2. Identify, assess and predict impacts and meet methodologies to minimize the negative impacts.
3. Perform critical analysis of EIS.
4. Understand specific legal issues related to the EIA process and the implementation of renewable energy projects.
5. Identify, assess and predict impacts and meet methodologies to minimize the negative impacts of renewable energy projects.
6. Planning the development of an Environmental Impact Study.

Prerequisites

Before the course unit the learner is expected to be able to:
Not required.

Course contents

Introduction to Environmental Impact Assessment (EIA): definitions, principles, goals, roles. EIA processes: phasing and methodology; case-studies. Legal framework: international, European and Portuguese EIA law. Environmental Impact Studies in renewable energy projects.

Course contents (extended version)

1. Introduction to EIA: definitions, principles, goals, roles. Context of environmental policy.
2. The national system of environmental impact assessment. Public participation.
3. Methodologies and techniques in EIA. Planning and management of environmental impact study.
4. Post-evaluation. Strategic environmental assessment: evolution, scope, forms and benefits.
5. Mitigation of negative impacts during the construction and operation of enterprises.
6. Post-evaluation of residual impacts. Plans for minimizing impacts.
7. Case Study: National and European.

Recommended reading

1. Boyle G. (editor). (2004). Renewable Energy: Power for a Sustainable Future. Oxford University Press. 2nd Ed, Oxford.
2. Canter, L. W. , (1996). Environmental Impact Assessment. McGraw-Hill. 2nd Ed, New York.
3. Davis, M. L. Davis & Cornwell, D. A. (1998). Introduction to Environmental Engineering. 3rd Ed, McGraw-Hill.
4. Glasson, J. , Therivel, R. and Chadwick, A. (2005). Introduction To Environmental Impact Assessment. University College London (UCL) Press. 2nd Ed, London.
5. Partidário, M. R. and Jesus J. , (2003). Fundamentos de Avaliação de Impacte Ambiental. Universidade Aberta, Lisboa.

Teaching and learning methods

Conventional lectures; use of power point presentations and internet resources. Laboratory classes. Field Classes. Course materials available in the e-learning platform. For the foreigner students there is a specific training programme and evaluation based in individual working plans related to their national environmental specifications.

Assessment methods

1. A1 - (Regular, Student Worker) (Final, Supplementary)
 - Presentations - 10%
 - Case Studies - 35%
 - Practical Work - 5%
 - Final Written Exam - 50%
2. A2 - (Student Worker) (Supplementary)
 - Final Written Exam - 100%
3. A3 - (Regular, Student Worker) (Special)
 - Final Written Exam - 100%

Language of instruction

1. Portuguese
2. Portuguese, with additional English support for foreign students.

Electronic validation

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| Marina Maria Pedrosa Meca Ferreira Castro | Ana Maria Alves Queiroz da Silva | Paulo Alexandre Vara Alves |
| 19-02-2022 | 24-02-2022 | 25-03-2022 |