School of Agriculture
Course Unit Syllabus

Level of qualification:
Short cycle (TESP)
Study cycle:
Environmental Protection Systems

Course Unit: **223520 – Energy and Climate Change**

Year 2 **Semester 3** **ISCED Code: 712** **ECTS: 3.0**

Tipe of Course Unit: Compulsory **Delivery Mode:** Face-to-face **Language of Instruction:** Portuguese

COURSE COORDINATOR: Ana Cristina Dinis Vicente Pardal

HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
75		**15**	**15**						**45**

Prerequisites (if applicable): Not applicable

LEARNING OUTCOMES (knowledge, skills and competence)

. To know the contribution of the various energy sources in the development of societies

. Identify different types of energy and their respective environmental impacts

. To perceive the energy dependence of the present societies, as well as the insecurity / instability in the supply and the prices resulting from the current geopolitical picture

. To know emission sources of greenhouse gases

. Know mitigation and adaptation processes

CONTENTS

Different types of energy and their environmental impacts

Sources of greenhouse gas emissions

Climate

Climate change

Mitigation and adaptation

Energy footprint

Legislation

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

These programmatic contents allow:

- address the issue of energy production, showing the impacts on the environment;

- show the different sources of renewable energy;

- Know the energy situation of Portugal;

- To know the main Documents / Legislation / Treaties;

- to know the main climatic changes, as well as their causes and effects;

- to know processes of mitigation and adaptation.

TEACHING METHODOLOGIES

Expository lessons (using audiovisual media), resolution of exercises, literature research, group work, study visit

DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

Expositive classes allow forward to students, in a concise manner, the necessary information, which can and should be supplemented / complemented by individual research by the students, guided by the teacher.

With the study visits is intended to show students examples of energy production units, allowing the development of skills on the part of students.

Group activities allow students to research topics covered in class and to have knowledge of different search engines / sites related to the area

With this perspective, the aim of a new dynamic in the classroom, making them more creative and motivating for students

EVALUATION METHODS

Activities (50%) Test writing (50%)

MAIN BIBLIOGRAPHY

• Luís Castanheira, Joaquim Borges Gouveia. Energia, Ambiente e Desenvolvimento Sustentável. s.l. : SPI – Sociedade Portuguesa de Inovação, 2004.

• Conhece e valoriza as alterações climáticas - Propostas para trabalhar em grupo. Pablo Ángel Meira Cartea (Coord.) FUNDACIÓN MAPFRE, 2012

• Informação disponível: Agência Portuguesa do Ambiente, Agência Europeia do Ambiente, Direção Geral de Energia e Geologia

• Legislation.

Year of implementation: 2016/2017 | Date of approval by the Technical-Scientific Board: