
Ano Letivo 2022-23

Unidade Curricular CLIMA MARINHO E ATMOSFÉRICO

Cursos RISCOS COSTEIROS, IMPACTOS DAS ALTERAÇÕES CLIMÁTICAS E ADAPTAÇÃO - COASTHazar
(2º CICLO) ERASMUS MUNDUS

Unidade Orgânica Faculdade de Ciências e Tecnologia

Código da Unidade Curricular 19391000

Área Científica CIÊNCIAS DA TERRA

Sigla

Código CNAEF (3 dígitos) 443

**Contributo para os Objetivos de
Desenvolvimento Sustentável - 13**
ODS (Indicar até 3 objetivos)

Línguas de Aprendizagem English

Modalidade de ensino

Face to face

Docente Responsável

Óscar Manuel Fernandes Cerveira Ferreira

DOCENTE	TIPO DE AULA	TURMAS	TOTAL HORAS DE CONTACTO (*)
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* Para turmas lecionadas conjuntamente, apenas é contabilizada a carga horária de uma delas.

ANO	PERÍODO DE FUNCIONAMENTO*	HORAS DE CONTACTO	HORAS TOTAIS DE TRABALHO	ECTS
1º	S1	30T; 20TP	125	5

* A-Anual;S-Semestral;Q-Quadrimestral;T-Trimestral

Precedências

Sem precedências

Conhecimentos Prévios recomendados

N/A

Objetivos de aprendizagem (conhecimentos, aptidões e competências)

Students will know and understand the main phenomena associated with the climate system, especially processes associated with water and energy flows in the marine and coastal environment.

Students will understand the different climatic processes associated with meteorology and oceanography and will learn the nomenclature and meaning of the different environmental variables that will be used throughout the Master's degree.

Students will evaluate climatic variations at different time scales of the environmental variables to be used throughout the Master.

Students will know the meteo-oceanographic variables and how to combine in a deterministic and probabilistic way these variables for their application in problems associated with the variables for their application to problems associated with the coastal environment.

Students will understand the phenomenon of Climate Change and the specific implications associated with variables of interest in the coastal environment.

Conteúdos programáticos

Topic 1. The Climate system

?Topic 2. Introduction to Meteorology

? Topic 3. Introduction to Hydroclimatology

? Topic 4. Introduction to Oceanography

? Topic 5. Climate Variability

? Topic 6. Climate Change

Metodologias de ensino (avaliação incluída)

ASSESSMENT METHODS AND CRITERIA

Evaluation 1:	Type: Written exam	15,0%
Evaluation 2:	Type: Written exam	15,0%
Evaluation 3:	Type: Written exam	15,0%
Evaluation 4:	Type: Written exam	15,0%
Exercise 1:	Type: Work	12,00%
Exercise 2:	Type: Work	12,00%
Exercise 3:	Type: Work	16,00%

Observations:

It is obligatory to attend the 80% of the classroom teaching -Only for duly justified causes (eg sanitary restrictions), the evaluations may be organized remotely.

Bibliografia principal

Hartmann, D. L. (2015). Global physical climatology (Vol. 103). Newnes.

Stocker, T. F. (Ed.). (2014). Climate change 2013: the physical science basis: Working Group I contribution to the Fifth assessment report of the Intergovernmental Panel on Climate Change. Cambridge University Press

Academic Year 2022-23

Course unit

Courses Coastal Hazards - Risks, Climate Change Impacts and Adaption (COASTHazar)

Faculty / School FACULTY OF SCIENCES AND TECHNOLOGY

Main Scientific Area

Acronym

CNAEF code (3 digits) 443

Contribution to Sustainable Development Goals - SGD (Designate up to 3 objectives) 13

Language of instruction English

Teaching/Learning modality Face to face

Coordinating teacher Óscar Manuel Fernandes Cerveira Ferreira

Teaching staff	Type	Classes	Hours (*)
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* For classes taught jointly, it is only accounted the workload of one.

Contact hours	T	TP	PL	TC	S	E	OT	O	Total
	30	20	0	0	0	0	0	0	125
T - Theoretical; TP - Theoretical and practical ; PL - Practical and laboratorial; TC - Field Work; S - Seminar; E - Training; OT - Tutorial; O - Other									

Pre-requisites

no pre-requisites

Prior knowledge and skills

N/A

The students intended learning outcomes (knowledge, skills and competences)

Students will know and understand the main phenomena associated with the climate system, especially processes associated with water and energy flows in the marine and coastal environment.

Students will understand the different climatic processes associated with meteorology and oceanography and will learn the nomenclature and meaning of the different environmental variables that will use throughout the Master's degree.

Students will evaluate climatic variations at different time scales of the environmental variables to be used throughout the Master.

Students will know the meteo-oceanographic variables and how to combine in a deterministic and probabilistic way these variables for their application in problems associated with the variables for their application to problems associated with the coastal environment.

Students will understand the phenomenon of Climate Change and the specific implications associated with variables of interest in the coastal environment

Syllabus

? Topic 1. The Climate system

?Topic 2. Introduction to Meteorology

? Topic 3. Introduction to Hidroclimatology

? Topic 4. Introduction to Oceanography

? Topic 5. Climate Variability

? Topic 6. Climate Change

Teaching methodologies (including evaluation)

ASSESSMENT METHODS AND CRITERIA

Evaluation 1: Type: Written exam 15,0%

Evaluation 2: Type: Written exam 15,0%

Evaluation 3: Type: Written exam 15,0%

Evaluation 4: Type: Written exam 15,0%

Exercise 1: Type: Work 12,00%

Exercise 2: Type: Work 12,00%

Exercise 3: Type: Work 16,00%

Observations:

It is obligatory to attend the 80% of the classroom teaching -Only for duly justified causes (eg sanitary restrictions), the evaluations may be organized remotely.

Main Bibliography

Hartmann, D. L. (2015). Global physical climatology (Vol. 103). Newnes.

Stocker, T. F. (Ed.). (2014). Climate change 2013: the physical science basis: Working Group I contribution to the Fifth assessment report of the Intergovernmental Panel on Climate Change. Cambridge University Press