
Ano Letivo 2022-23

Unidade Curricular SUSTAINABLE URBAN SYSTEMS

Cursos ECOHIDROLOGIA APLICADA - Erasmus Mundus (2.º Ciclo)

Unidade Orgânica Faculdade de Ciências e Tecnologia

Código da Unidade Curricular 19311008

Área Científica TECNOLOGIAS DE PROTEÇÃO AMBIENTAL

Sigla

Código CNAEF (3 dígitos) 851

**Contributo para os Objetivos de
Desenvolvimento Sustentável - 6 13 14**
ODS (Indicar até 3 objetivos)

Línguas de Aprendizagem english

Modalidade de ensino

presencial

Docente Responsável

Luís Manuel Zambujal Chícharo

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	S2	12T; 12PL; 6TC; 12S; 6OT	156	6

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

Precedências

Sem precedências

Conhecimentos Prévios recomendados

none

Objetivos de aprendizagem (conhecimentos, aptidões e competências)

Students understand the concept of sustainability in urban systems and are acquainted with related formal and informal planning policies, strategies and instruments and their implementation

Students have the ability to develop and design integrated planning solutions for water management in urban areas in different contextes and scales

Students are able to develop and apply solutions of integrated water management with a specific regard on water and climate related adaptation measures in urban areas

Conteúdos programáticos

- Introduction to sustainability in urban areas and the concept of integrated planning
- Basic knowledge on urban systems in different regions and processes of urbanisation
- Urban improvement programs, projects and tools to analysis and evaluate urban areas and systems as well as methods of participation in urban decision making and community-based concept for urban upgrading and development
- Function and dimensioning of urban stormwater systems
- Calculation of the urban water balance and deduction of measures for robust catchment areas
- Protection of urban areas from extreme storm events

Metodologias de ensino (avaliação incluída)

The course embraces lectures, group work and student presentations as well as a practical class. Course assessment comprises a compulsory oral exam and the evaluation of the results of the practical class submitted as a report by the students. Evaluation also includes a group report on the urban case study and the presentation to the class. The evaluation of the final report counts 50% and the oral exam as well as the presentation will count each 25% for the overall examination result.

All relevant information will be made available in the electronic tutoring (eg, class schedule, PDF files, lesson slides and all information necessary to follow up and carry out the proposed work).

Evaluation:

1. An oral exam
2. A oral presentation of a case study
2. A written report on the practical project

Bibliografia principal

Mostafavi, Mohsen et al. (Ed.) (2010) Ecological Urbanism. Lars Müller Publ., Baden

Pahl-Weber, Elke & Schwartz, Frank (Ed.) (2014) Space Planning and Design.

Integrated Planning and Design Solutions for future Megacities, Jovis, Berlin

Sharma, Ashock et al (ed.) (2018) Approaches to Water Sensitive Urban Design -

Potential, Design, Ecological Health, Economics, Policies and Community Perceptions, Elsevier

Academic Year 2022-23

Course unit

Courses Applied Ecohydrology - Erasmus Mundus (2.º Cycle)

Faculty / School FACULTY OF SCIENCES AND TECHNOLOGY

Main Scientific Area

Acronym

CNAEF code (3 digits) 851

Contribution to Sustainable Development Goals - SGD (Designate up to 3 objectives) 6,13,14

Language of instruction english

Teaching/Learning modality presencial

Coordinating teacher Luís Manuel Zambujal Chícharo

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
	12	0	12	6	12	0	6	0	156
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

none

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

- Students understand the concept of sustainability in urban systems and are acquainted with related formal and informal planning policies, strategies and instruments and their implementation
- Students have the ability to develop and design integrated planning solutions for water management in urban areas in different contextes and scales
- Students are able to develop and apply solutions of integrated water management with a specific regard on water and climate related adaptation measures in urban areas

Syllabus

- Introduction to sustainability in urban areas and the concept of integrated planning
- Basic knowledge on urban systems in different regions and processes of urbanisation
- Urban improvement programs, projects and tools to analysis and evaluate urban areas and systems as well as methods of participation in urban decision making and community-based concept for urban upgrading and development
- Function and dimensioning of urban stormwater systems
- Calculation of the urban water balance and deduction of measures for robust catchment areas
- Protection of urban areas from extreme storm events

Teaching methodologies (including evaluation)

The course embraces lectures, group work and student presentations as well as a practical class. Course assessment comprises a compulsory oral exam and the evaluation of the results of the practical class submitted as a report by the students. Evaluation also includes a group report on the urban case study and the presentation to the class. The evaluation of the final report counts 50% and the oral exam as well as the presentation will count each 25% for the overall examination result.

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Evaluation:

1. An oral exam
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3. A written report on the practical project

Main Bibliography

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Pahl-Weber, Elke & Schwartz, Frank (Ed.) (2014) Space Planning and Design.

Integrated Planning and Design Solutions for future Megacities, Jovis, Berlin

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