

Course: Specialisation Ocean Energy (Lisbon)

credits: 30

Course code	RWVM23SOE	Modes of delivery	Education
Name	Specialisation Ocean Energy (Lisbon)	Assessments	Specialisation Ocean Energy (Lisbon) - Other assessment
Study year	2026-2027		
ECTS credits	30		
Language	English		
Coordinator	H.M. Moesker		

Learning outcomes

The integrative mandatory module (Project):

- Project in Marine Renewable Energies

The objective of this curricular unit is to provide the students with the background and methodologies of multidisciplinary aspects associated with the various marine renewable energy technologies and bring into practice the specialised knowledge on marine energies in a case study. The objective will be achieved through formal lectures, tutorials, and a project.

Optional 6 ECTS curricular unit:

One curricular unit from IST Master's curricular plans. The selection is subject to approval. Among potential eligible modules are Engineering Project Management, Risk Assessment and Management in Projects, Technology-Based Entrepreneurship, Energy Systems Optimization, Power Electronics for Renewable Energy, Strategic and Marketing Management, Topics on Batteries, Design of Ship Structures, Risk Analysis, or Equipment and Systems Reliability + Systems Maintainability and Availability.

Content

Ocean energy (also referred to as Marine energy or marine power) refers to the energy carried by ocean waves and tides. It focuses on the physical mechanisms in the ocean (waves, tides and currents), hydrodynamic modelling of ocean energy systems and on the electro-mechanical equipment used in ocean energy systems, as well as its management, maintenance and control. Furthermore, it also provides some focus on offshore wind energy.

The EUREC EMRE specialisation at IST/UL comprises 5 modules. Four mandatory ones and one elective module within the vast amount of courses taught at IST/UL. Three modules are related to the technical aspects of offshore wind systems, wave energy systems, and tidal/current energy systems. Furthermore, there is an integrative module, the Project in Marine Renewable Energy, where the students select a project in the area of their interest and apply the knowledge acquired during the specialisation. Finally, an elective course of your interest.

Included in programme(s)

European Master in Renewable Energy

School(s)

Engineering, Life Sciences & ICT