Module label: Economics, Policy and Environment

Module code: pre334

Credit points: 4.5 KP

Workload: 135 h

Used in course of study:
- Master's Programme European Master in Renewable Energy (EUREC) > Mastermodule

Skills to be acquired in this module:
- At the completion of this module, the student will:
  - be familiar with the basic economic analysis of ocean energy systems including the cost, financing and economic evaluation
  - acquire basic knowledge on the general policy issues regarding ocean energy systems and more detailed knowledge on the licensing and permitting procedures for installation of OE systems and enabling mechanisms as funding, feed-in tariffs and tax incentives
  - be able to perform simple environmental impact studies for OE systems.

Module contents:
- Marine spatial planning, concession regimes of marine areas; consenting and licensing of marine farms; feed-in tariffs, green certificates, tax incentives and other financial support mechanics.
- Economic analysis of a marine farm: present and future cost of energy (LCOE, externalities) - the role of offshore energy; characterization of offshore renewable costs (CAPEX and OPEX); project financing; principles (equity, debt ratio), parameters (discount rate, return period, NPV, IRR), tools (Retscreen, etc.) and risk assessment.
- Environmental and socio economic impact assessment and monitoring: EIA objectives, process and requirements; public consultation and conflict of uses management; environmental monitoring; life-cycle assessment.

Reader's advisory:
Ernst & Young and DECC (UK): Cost of and financial support for offshore wind, 2009.

Links:
- Language of instruction: English
- Duration (semesters): 1 Semester
- Module frequency: jährlich
- Module capacity: unlimited
- Module level: MM (Mastermodul / Master module)
- Modular: je nach Studiengang Pflicht oder Wahlpflicht
- Lern-/Lehrform / Type of program: Lectures, Tutorial, Self-study

Examination

Type of examination
- Written exam (60%): 2.5 hours
- Written report (40%): essay on a chosen topic, 15-20 pages

Course type: Seminar

SWS Frequency
- Workload attendance: 0 h