

Vak: Wind and Marine Energy

credits: 5

Vakcode	RWVM23WHE
Naam	Wind and Marine Energy
Studiejaar	2026-2027
ECTS credits	5
Taal	Engels
Coördinator	N.C. Adema

Werkvormen	Onderwijs
Toetsen	Assignment WHE - Presentatie Lab WHE - Opdracht Theory - Schriftelijk, organisatie ToetsCentrum

Leeruitkomsten

After completion of the module the student is able to:

- Perform a resource assessment on basis of wind speed measurements (Application)
- Analyse and Interpret wind turbine performance measurements (Evaluation)
- Develop a mathematical/physical model to optimize a wind turbine design in terms of energy production, loads and costs (Application)
- Determine and examine acoustic noise levels on a wind turbine (Analysis)
- Assess in a qualitative. and where, possible quantitative way measurement and calculation errors with uncertainties (Evaluation)
- To understand the-state-of-the-art of marine energy and investigate the future potential of marine energy (Analysis)
- Report and present in group form, the results of experiments and analyses in a scientifically correct way

Inhoud

Content of the module:

In terms of scientific and technical contents this module will treat the following aspects of wind energy:

- • Introduction into wind energy
 - The wind energy sector in a bird view: history, markets, scenario's and roadmaps,
 - Technological challenges and concepts
 - Off-shore wind energy versus on-shore wind energy
 - Wind climate and resource assessment (measurements and modelling)
- Rotor design (aerodynamics, aero-elasticity, acoustics, costs)
- Introduction into Marine energy

Opgenomen in opleiding(en)

European Master in Renewable Energy

School(s)

Engineering, Life Sciences & ICT