

MSc Programme

European Wind Energy Master (EWEM)



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Even with our best efforts to promote energy efficiency, the global demand for energy to power our way of life continues to increase. Clearly, we must develop new sources of energy, and among them, wind energy offers great promise: after all, the wind itself is free, wind power is clean, and it is virtually inexhaustible as well. In recent years, research on wind energy has accelerated, and new developments in efficiently and cost-effectively harnessing wind energy are making it increasingly attractive and competitive. The European Wind Energy Master is an Erasmus Mundus MSc degree programme that is built on a body of emerging research that has the potential to shape the future

of the wind energy sector. In preparing engineers for a truly global sector, one of the goals of the programme is to train professionals to be resourceful problem solvers capable of collaborating with colleagues across cultural divides. You will acquire knowledge in theoretical and applied sciences underlying wind energy systems, and specific competencies necessary to operate in your chosen area of specialisation.

When successfully completing the programme you will be awarded a double MSc degree: one diploma from each of two partner universities, depending on which specialisation you follow.

What is an Erasmus Mundus Master's degree?

The European Commission's Erasmus Mundus programme label is awarded to joint MSc programmes of outstanding quality. This award includes full scholarships and fellowships for students and visiting scholars. The EWEM consortium is composed of four universities: Delft University of Technology (TU Delft), Technical University of Denmark (DTU), Norwegian University of Science and Technology (NTNU) and the Carl von Ossietzky Universität Oldenburg (UniOL). They all have long histories of research, innovation, and teaching performance in wind energy.

Programme specialisations

EWEM offers four specialisations along the energy conversion chain, each with two or three areas of focus:

Wind Physics

- Atmospheric aerodynamics and turbulence
- Wind farm aerodynamics

Rotor Design

- Aerodynamics
- Structure and design
- Composite Design Material Production and Manufacturing

Electrical Power systems

- Power Systems
- Power Electronics and Drives

Offshore Engineering

- Installation, Accessibility & Maintenance
- Design of Offshore Support Structures
- Modelling & Optimization of Soil Mechanics & Mooring Systems

As an EWEM student you will spend your time at no fewer than two and no more than four different partner universities. You can follow your internship and do part of your thesis with one of our over forty associated partners, ranging from industrial firms to other universities to research institutions.

European Wind Energy Master (EWEM) curriculum

	First Year (60 EC)		2nd year (60 EC)			
	1 st semester	2 nd semester	3 rd semester	4 th semester		
Wind Physics	DTU: Introduction to Wind Energy Technology, Economics, Management and Organisation	UniOL	Summer school Internship (6-9 EC)	DTU	MSc thesis (30-45 EC) (university, research centre or industrial partner of choice)	
Rotor Design		TU Delft				DTU
Electric Power Systems		NTNU				TU Delft
Offshore Engineering		TU Delft				NTNU
				Innovation and Entrepreneurship Symposia		

- TU Delft = Delft University of Technology • DTU = Technical University of Denmark • NTNU = Norwegian University of Science and Technology
- UniOL = the Carl von Ossietzky Universität Oldenburg

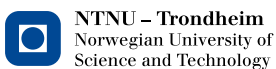
- 1 EC = 28 hrs study, according to the European Credit Transfer System (ECTS) • Total number of credits MSc programme = 120 EC

Career prospects

The total number of jobs in the wind energy sector in Europe is expected to grow from the current 200,000 to 450,000 in 2020. Globally, the growth will be even faster. It is expected that globally, wind energy jobs will double every 10 years, from 630,000 in 2010 to 2,400,000 in 2030. A large proportion of our graduates find work, often before graduation, with EWEM associated partners. Others work in wind energy research, remain in academia, or begin their own firms. The growth in wind energy will continue to drive the demand for qualified engineers and researchers.

Admission requirements

Candidates must have earned a BSc diploma equivalent to 180 ECTS by completing at least 3 years of studies at university. Depending on the specialisation, candidates should have a BSc in one of the following: Mechanical Engineering, Aerospace Engineering, Physics, Mathematics, Electrical engineering, Civil Engineering, Structural engineering, Marine Engineering or a degree with equivalent core content.



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For further information: www.windenergymaster.eu

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