



Master

European Wind Energy

Wind energy offers considerable promise: the wind itself is free, wind power is clean, and it is inexhaustible.

Diploma	Double MSc degree depending on chosen specialisation
Credits	120 ECTS, 24 months
Starts in	September
Language of instruction	English

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.

One of these sources, wind energy, offers considerable promise: the wind itself is free, wind power is clean, and it is inexhaustible. In recent years, research on wind energy has accelerated, and new developments in efficient and cost-effective ways of 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 upon 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 programme's goals is to train professionals to become resourceful problem solvers who are capable of collaborating with colleagues across cultural divides. Students acquire knowledge in the theoretical and applied sciences that underlie wind

energy systems, in addition to specific competences that they will need in order to function in your chosen area of specialisation. Upon successful completion of the programme, students are awarded a double MSc degree: one diploma from each of two partner universities, depending upon the specialisations that they follow.

Programme

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 a selection of students and visiting scholars. Erasmus Mundus programmes include a compulsory mobility scheme for all students.

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 University of Oldenburg (UniOL). Each of these institutions has a long history of research, innovation, and teaching performance in wind energy.

Mobility path European Wind Energy Master (EWEM)

	First Year (60 ECTS)		Second year (60 ECTS)	
	1 st semester	2 nd semester	3 rd semester	4 th semester
Wind Physics	DTU: General introduction to Wind Energy	UniOl	Summer school	DTU
Rotor Design		TU Delft		DTU
Electric Power Systems		TU Delft		NTNU
Offshore Engineering		TU Delft		NTNU
				MSc thesis: with 2 EWEM partners, and possible participation of industry or other research institute

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

For more information on all courses: www.windenergymaster.eu

Engineering specialisations

EWEM offers four specialisations along the energy conversion chain, each with two or three areas of focus. The four specialisations that are offered are:

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 and maintenance
- Design of offshore support structures
- Modelling and optimisation of soil mechanics and mooring Systems

As an EWEM student, you will spend your time at least at two of the four different partner universities. The possibility exists to complete your internship and conduct part of your thesis work with one of our

more than 40 partner organisations, ranging from industrial firms to other universities and research institutions.

Career prospects

The number of jobs in the wind energy sector in Europe is expected to increase from the current 200 000 to 450 000 by 2020. Globally, the growth will be even faster: wind energy jobs throughout the world are expected to double every 10 years, increasing from 630 000 in 2010 to 2 400 000 in 2030. The growth in wind energy will continue to drive the demand for qualified engineers and researchers.



Bas Verheugt
(The Netherlands)

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After completing my Bachelor's degree at the Delft University of Technology, I chose to pursue a Master's degree at the same university, for several reasons. First, I like the open atmosphere amongst the students and academic staff. You are always welcome to ask questions to your professor or, if the professor is not available, one of his or her colleagues.

The second reason is that the programme has many electives. This allows all students to choose their favourite subjects. Another reason why I made this choice is that I am interested in topics related to modelling and numerical analysis, and the university has wide experience in this field. On an average day, I have some classes, but I am usually studying with other students by completing exercises or working on projects. Studying together helps students keep each other motivated and learn how to cooperate with others.

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Our graduates find work with EWEM associated partners, in wind energy research, remain in academia or begin their own firms.

Admission requirements and application procedures

More details on the admission requirements can be found on the EWEM website: www.windenergymaster.eu

BSc degree from a Dutch university or International degree

To be considered for admission to any MSc Programme, you must meet the general admission requirements of TU Delft.

1. A BSc degree (or a proof that you have nearly completed a BSc programme) in a field closely related to the MSc programme
2. A BSc Cumulative Grade Point Average (CGPA) of at least 75% of the scale maximum
3. Proof of English language proficiency
A TOEFL score of at least 90 (internetbased test) or IELTS (academic version) overall Band score of at least 6.5. For international students, the application period starts October 1 and closes at April 1. To start an MSc application, please complete the online application and pay the refundable application fee of € 100 (fee refunded when registered).

For more information about the application procedure go to www.admissions.tudelft.nl

Degree from a (Dutch) university of applied sciences (Dutch HBO)

An HBO Bachelor's degree does not qualify you for direct admission to this Master's degree programme. EWEM doesn't have an own bridging minor. Candidates who believe they have enough experience and have done a relevant bridging programme are invited to contact the coordinator and will be considered on a case by case basis. See www.hbodoorstroom.tudelft.nl for detailed information.

Application goes through Studielink: tudelft.studielink.nl

Application process

The application process is conducted by the TU Delft International Office and EWEM.

Applicants should apply online according to the regulations and procedure described on the TU Delft application website and on www.windenergymaster.eu

The deadline for application is the 1st of April. Applicants wishing to be considered for an Erasmus Mundus scholarship or TU Delft Excellence scholarship should

ensure that their files are received before the 1st December of the year prior to the start of the programme. Besides these regulations, the following guidelines will be used to consider applications.

1. Candidates must have obtained a BSc diploma of substantial quality and level corresponding to at least 3 years studies at Research University, equivalent to 180 ECTS.
2. The programme builds upon a first degree such as a Bachelor's degree or an equivalent qualification in a related field. The four engineering specialisations have different degree requirements.
 - For the Rotor Design track applicants must hold a Bachelor's degree in either Mechanical, Aerospace Engineering, Physics or a degree with equivalent core content.
 - For the Wind Physics track applicants must hold a Bachelor's degree in either Mechanical engineering, Aerospace engineering, Mathematics or Physics or a degree with equivalent core content.
 - For the Electrical Power Systems track applicants must hold a Bachelor's degree in Electrical engineering, Physics or a degree with equivalent core content.

- For the Offshore Engineering track applicants must hold a Bachelor's degree in either Civil engineering, Structural engineering, Mechanical Engineering, Marine Engineering, Physics or a degree with equivalent core content.
- Applicants who are enrolled in an integrated five year degree with no bachelor entry level must have passed 180 ECTS and will be evaluated on an individual basis.
 - BEng graduates are assessed on an individual basis.
 - For all tracks, the BSc Cumulative Grade Point Average (CGPA) must be at least 75% of the scale maximum. Preliminary transcripts are acceptable when applying, but the final degree certificate is required before the start of the programme. Applicants with an MSc and/or professional experience will be assessed on an individual basis.
 - Proof of English language proficiency (certificates older than two years are not accepted): A TOEFL (Test of English as a Foreign Language) score of at least 90 (internetbased test). Please note that we only accept the TOEFL internet-based test. Or IELTS (academic version) overall Band score of at least 6.5.
 - The applicant's qualifications must include a strong working knowledge of mathematics and experience in programming and applicants must document that they have fulfilled the following minimum requirements:
 - Mathematics: 25-30 ECT
 - Physics: 10-15 ECTS
 - Engineering design methodology: 5-15 ECTS
 - For the specialisations Wind Physics, Rotor Design and Offshore Engineering, students must document the following minimum requirements:
 - Statics, mechanical vibrations, and strength of materials: 10-15 ECTS
 - Fluid mechanics, engineering thermodynamics, and heat transfer: 10-15 ECTS
 - Materials science, and production technology: 10-15 ECTS
 - For the tracks Electric Power Systems, students must document the following minimum requirements:
 - Power electronics: 10-15 ECTS
 - Grid Integration: 10-15 ECTS
 - A working knowledge at bachelor level of at least four of the following five subjects is prerequisite for the central courses of the MSc programme: Engineering design methodology Statics, mechanical vibrations, and strength of Materials Fluid mechanics, Applied mathematics, numerical methods and elementary programming using e.g. MATLAB or Fortran.

- When evaluating the application, the lack of one or more of these requirements will be weighed against the other qualifications of the applicant, and possible admission might be considered.

For more information about scholarships go to: www.scholarships.tudelft.nl



For further information

Please visit the webpage for all details, complete requirements, deadlines and contact information:

<http://www.windenergymaster.eu>

Alternatively, you can also contact the master coordinator:

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Further information for international applicants

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More information on:

Scholarships: www.scholarships.tudelft.nl
www.windenergymaster.eu
Online education:
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