

MSc Programme European Wind Energy Master (EWEM)



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Diploma	Double MSc degree depending on chosen specialisation
Credits	120 ECTS, 24 months
Starts in	August
Language of instruction	English
% International students	100%

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 a 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 competencies 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 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)		Summer School	Second year (60 ECTS)	
	1 st semester	2 nd semester		3 rd semester	4 th semester
Electrical Power Systems	Introduction to Wind Energy	TU Delft	Summer School	NTNU	M.Sc. Thesis Free mobility
Offshore Engineering		TU Delft		NTNU	
Rotor Design		TU Delft		DTU	
Wind Physics		uniOL		DTU	

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 tracks 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 an 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.

In our alumni network we have people working for renowned wind energy companies like Siemens, Vestas, DONG, and Van Oord, and others doing research for our own universities, other universities like for example RWTH Aachen or research institutes like Fraunhofer IWES. The list of employers is long and most of our graduates find a job shortly after or even slightly before graduation.



Oriol Ferret Gasch, Rotor Design graduate 2014

I have to say that there has never been a day I regretted submitting my application, now already 4 years ago. EWEM offered me the chance of discovering new opportunities that I would not have noticed had I not moved out of my comfort zone.

The most important elements of being a double degree student at different universities in different countries, were the diverse new perspectives it brought me in problem solving, research and personal development. A potential personal asset that you can keep in your pocket for future challenges.

Currently, I am an aerodynamics & aeroacoustics design engineer at Siemens Wind Power A/S (Denmark), working in R&D projects related to outer shape blade design, aeroacoustics modeling applied to wind turbines and rotor performance validation which also involve some wind tunnel testing. A multidisciplinary and challenging work field where I work with specialists from all over the world.

I strongly encourage anybody interested in this field of engineering to go for the EWEM programme, an excellent development, professionally and personally speaking.

Admission requirements and application procedures

Exact details on EWEM's admission requirements, including specific criteria per track, can be found on the EWEM website: www.windenergymaster.eu.

In general the following criteria apply:

1. Candidates must have obtained a BSc diploma of substantial quality and level corresponding to at least 3 years studies at a research university, equivalent to 180 ECTS, in a field closely related to the chosen track.
2. A BSc Cumulative Grade Point Average (CGPA) of at least 75% of the scale maximum. For certain countries higher CGPA's are required. Further information can be found on the Admissions website.
3. Proof of English language proficiency (TOEFL, IELTS or Cambridge). Exact required scores to be found on Admissions website.

The four tracks have different degree requirements:

- Wind Physics: applicants must hold a BSc degree in either Mechanical engineering, Aerospace engineering, Mathematics or Physics or a degree with equivalent core content.
- Rotor Design: applicants must hold a BSc degree in either Mechanical, Aerospace Engineering, Physics or a degree with equivalent core content.
- Electric Power Systems: applicants must hold a BSc degree in Electrical engineering, Physics or a degree with equivalent core content.
- Offshore Engineering: applicants must hold a BSc degree in either Civil engineering, Structural engineering, Mechanical Engineering, Marine Engineering, Physics or a degree with equivalent core content.



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

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 who have fulfilled a bridging programme for the TU Delft MSc programme of AE, 3ME or EEMCS 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



Lisa Ziegler, Offshore Engineering graduate 2015

Recently, I started my industrial PhD at Rambøll Wind in Hamburg. My PhD project deals with the question: can operators extend the operation of wind turbines at the end of their design lifetime (typically 20 years)? A hot topic in industry & academics currently – and the EWEM program prepared me best for the challenge. I apply knowledge gained in my main courses on a daily basis. A benefit is: I already “saw how the wind blows” in

due to many valuable contacts that I gained through the EWEM network.

EWEM means studying at 3 universities - but also being part of a strong network of students from all over the world. The international experience is worth the struggle of moving every 6 months to another location. I am looking forward to settle down in Hamburg, but when I tell you that I can't wait to return to NTNU in Norway for a PhD secondment next year, you know how much I enjoyed every minute of this

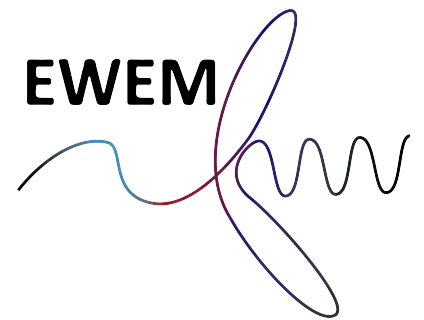
ASE Aeolus

Aeolus is the association for students of EWEM and was founded in 2014. ASE Aeolus aims to be the default go-to organisation for students of EWEM who want to enrich their study experience and the go-to organisation for the European wind energy industry to engage with wind energy students. They organise social events, multiple day excursions and they provide study guidance. The current board consists of 5 people and they will change every year. Additionally, the board appoints student Track Representative (TR's). Each track will be represented by an own student.

For more information, visit the website <https://ase-aeolus.com/>



Multiple Day Excursion 2018



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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More information on:

Scholarships:
www.scholarships.tudelft.nl
www.windenergymaster.eu
Online education:
www.tudelft.nl/online-education

 www.facebook.com/europeanwindenergymaster