

## Minor Offshore Wind Energy



Minor

# Offshore Wind Energy

“The minor establishes a link between technology and social context. This makes the programme socially relevant and attractive to students who want to look beyond the boundaries of disciplines.”

Language	English
Start	September
Credits	30 ECTS
Capacity	50 students
Specifics	Minor for BSc students AE, 3mE, CEG and EEMCS

The minor Offshore Wind Energy is jointly organised by the faculties of Aerospace Engineering, Technology, Policy and Management (TPM) and Civil Engineering and Geosciences (CEG). The minor is aimed at engineering students who are interested in the planning, management and operational aspects of offshore wind farms.

### Why?

Wind energy is one of the most promising renewable energy sources. Generating wind power at sea in offshore wind farms is a new, challenging and sustainable development in this fast growing industry. The demand for wind energy professionals with a technical, economic and management background, for specialists who are also generalists, is huge. This minor is an opportunity for students to explore this new branch of the offshore wind industry, and to acquire an in-depth understanding of the technical, financial and

political aspects of offshore wind. The course focuses on the link between developing new technology and the relationship with the social context.

### Who is this minor for?

This minor is for Bachelor's students of AE, 3mE, EEMCS and CEG. Students are expected to possess sufficient prior knowledge in the fields of mathematics, physics and mechanics. Students that do not fully, but nearly, comply with the requirements may apply for admission, but permission to enroll will be granted on a case-by-case basis. Students will follow one and the same minor programme, without any subdivision into tracks. They are also expected to attain the same level of knowledge and skills (i.e. meet the minor exit qualifications) after completing the minor, regardless of their background.



The minor establishes a link between technology and social context. This makes the programme socially relevant and attractive to students who want to look beyond the boundaries of disciplines.<sup>1</sup>

### The programme

The programme includes both construction courses and process management courses, supplemented with practice and integration. On the one hand students will learn about constructing, using and maintaining offshore wind farms. On the other hand they will be given an overview of the technical, financial, political, management and safety aspects in the various phases of an offshore wind farm.

### What you will learn

- Acquire knowledge and skills in order to apply basic project management theory
- Know how to work in a project environment and be familiar with project management tools
- Acquire knowledge of offshore wind farm technology and of the related operations
- Gain insight into project and asset management techniques and how to apply these to offshore wind farms
- Gain insight into the economy of electrical infrastructures, especially the economic and social challenges of a future sustainable electricity supply
- Be able to integrate the acquired knowledge and skills, including being able to reflect on the technical, economic and social prospects of offshore wind

### Minor structure

Important themes are the transport of (offshore generated) electricity and placing the development of Offshore Wind Energy in relation to the social debate, project management and energy markets. The minor consists of five courses and an Integration Assignment. The aim of the Integration Assignment is to integrate and apply the knowledge acquired in the technical domain and in the social/economic domain. The courses of the minor will be taught by professors from different faculties:

1. Introduction to Wind Energy (AE, 4 EC)
2. Operations Maintenance and Safety on site (AE, 4 EC)
3. Economy of Infrastructures (TPM, 7 EC)
4. Project Management Basics (CEG, 5 EC)
5. Asset Management (AE, 4 EC)
6. Integration Assignment (AE, 6 EC)

### Information

For more information about all courses, see [www.studyguide.tudelft.nl](http://www.studyguide.tudelft.nl)

[www.lr.tudelft.nl/offshore-wind-energy](http://www.lr.tudelft.nl/offshore-wind-energy)

### Contact

Prof. Dr. G.J.W. van Bussel  
(minor coordinator)  
Kluyverweg 1  
2629 HS Delft  
The Netherlands  
[G.J.W.vanBussel@tudelft.nl](mailto:G.J.W.vanBussel@tudelft.nl)

S. Lkoundi MSc (minor organiser)  
Kluyverweg 1  
2629 HS Delft  
The Netherlands  
[S.Lkoundi@tudelft.nl](mailto:S.Lkoundi@tudelft.nl)

 [www.facebook.com/TUdelftAerospaceEngineering](https://www.facebook.com/TUdelftAerospaceEngineering)

 [@AETUdelft](https://twitter.com/AETUdelft)

 [www.instagram.com/TUdelft](https://www.instagram.com/TUdelft)

 [www.campus.tudelft.nl](http://www.campus.tudelft.nl)