

# Built Environment | Exchange Delta Engineering

The aim of this course is to explain the complex dynamics in a delta with a growing port and city. This in connection with the global challenge created by economic growth and the rise in sea level: growing ports and cities in vulnerable deltas.

The course focuses on the technological implementation of possible solutions. There are four theoretical main subjects: Port & City Development, Delta Engineering, Water Systems Engineering and Dredging Technology. The minor is taught in English and also open to international students. Below, the objectives of each main subject are described briefly.

The theoretical part of the course is interspersed by external projects where experience is gained through 'learning by doing', comprising brief (two-weekly) assignments at a port, contractor, engineering firm or water authority. The assignments may involve analysing a certain problem or using supplementary theory to conduct a 'serious game'.

#### **Subjects**

For more information about the subjects see the <u>ECTS Course Catalogue</u>. Click on 'Exchange programme', select the correct schoolyear and search for the programmes under 'Institute of Future Environments'.

This minor is part of the Hanze UAS Groningen (Dutch-taught) Built Environment bachelor's programme.

Will take place in Semester 2 (spring semester)

# Number of ECTS credits

30

#### Language

English

### Available to

- students following the Built Environment programme at Hanze University of Applied Sciences Groningen (minor enrolment via Osiris);
- students from our partner institutions abroad. You can apply once your university has officially nominated you. For more information visit <u>hanze.nl/io</u>. The application deadline for the autumn semester is 15 May, for the spring semester this is 15 October.

## Expected knowledge before starting the minor Delta Engineering

- applied mechanics; external and internal equilibrium;
- applied mechanics; statically indeterminate constructions;
- · soil mechanics: calculations soil tensions and soil bearing capacity
- fluid mechanics/hydraulics: mass and energy balance, calculation of water flows, ground and surface water, pipes, water pressure on and in structures.

# **Contact person**

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