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Coastal Systems

IHE Delft Institute for Water Education

Certificate / Diploma Short course Delft

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Course description

Qualification Certificate

Field of study Engineering

Course summary The goal of this course is to elaborate the main coastal processes and phenomena, including hydrodynamics, morphology and ecosystems. The participants are familiarized with numerical modeling.

Course description The main goal of this course is to elaborate the processes and phenomena in the coastal area, including Coastal Hydrodynamics, Coastal Morphology and Coastal Ecosystems. Furthermore the participants will be familiarized with basics for numerical modeling to be aware of the limitations and characteristics of hydrodynamic numerical models. This course is useful for researchers and engineers dealing with modeling and analysis of coastal processes. Also the engineers involved in design of coastal protections can benefit from the insight of coastal processes provided in this short course. The following topics will be discussed: • Coastal Hydrodynamics • Sediment transport by currents plus waves • Sediment balance equation • Sedimentation of navigation channels • Current-induced scour around breakwaters • Formation of channels in deltas and tidal inlets • Transverse and longshore sand transport under the influence of waves and currents, • Modern longshore transport formulae and coastline computations • Analytical formulae • Background of mathematical models • Introduction to hard protection methods • Main system characteristics of the world's important coastal l

Study subjects Coastal Hydrodynamics and Morphology; Coastal Ecosystems and Management; Modelling and Numerical Aspects.



Course objectives	Basic understanding of coastal hydrodynamics and morphology; basic understanding of Ecosystem in the coastal zone and how to deal with it; understand the basics of numerical aspects, be aware of the limitations and characteristics of hydronamic numerical models, know the principle of finite differences and finite element-based methods.
ECTS credits	5.00
Duration	3 week(s) full-time
Language of instruction	English
Instruction modes	computer modeling, individual assignment, lecture, literature study, self study
Accreditation	-

About the institution

Department IHE Delft

Information about the institution
IHE Delft Institute for Water Education is the largest international graduate water education facility in the world and the only institution in the UN system to confer accredited MSc degrees and promote PhDs. It offers degree programmes, short courses, online courses and tailor-made training. Since 1957 the Institute has provided graduate education to more than 15,000 water professionals from over 160 countries. More than 175 PhD candidates were promoted. IHE Delft is at the centre of a vast international network of water related institutions, and functions as an interface between knowledge networks and centres, public and private sector organizations, scientific and professional associations and other members of the international water community. The Institute runs a substantial number of joint MSc programmes implemented in partnership with universities around the globe. These joint programmes combine the strengths of the collaborating institutions and deliver either multiple degrees or a joint degree.

Admission

Admission requirements	<ol style="list-style-type: none"> 1. Several years of relevant working experience 2. Relevant wo bachelor (academic bachelor): BSc degree or equivalent qualification in a relevant field from a recognised university
Language requirements	IELTS overall band 6 TOEFL internet based 87 TOEFL paper based 999
Professional experience required	-
Duration	3 week(s) full-time
Application	Start date EU/EEA Students Non-EU/EEA students



deadlines 10 Feb 2020 10 Jan 2020 10 Jan 2020

Year EU/EEA Non-EU/EEA Institutional

2019 (FT) € 2910 € 2910 n.a.

In short, the following rules apply:

- Tuition fees
- The "EU/EEA rate" is the regular fee for students from within the EU/EEA.
 - The "non-EU/EEA rate" is the rate for students from outside the EU/EEA.
 - The "institutional rate" is for all students who have already obtained a bachelor's or master's degree and who want to start a second programme leading to a degree at the same level or at a lower level.
 - Note that FT, PT and D stand for "full-time", "part-time" and "dual", respectively.

Make sure you contact your institution to find out what rate applies to you. The rates listed here are estimates.

Scholarships Orange Knowledge Programmes (OKP), MENA Scholarship Programme , Netherlands Fellowship Programmes (NFP)

For more scholarships, visit: www.grantfinder.nl

Course website [More information about the course](#)

Contact

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IHE Delft

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Telephone number

Course website

[More information about the course](#)

Institution website

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