

# POSTGRADUATE HYDROGRAPHY B

PROGRAMME JOINTLY OFFERED BY GHEENT UNIVERSITY, ANTWERP MARITIME ACADEMY

60 ECTS CREDITS - LANGUAGE: ENGLISH

## WHAT

Hydrography is a Greek word meaning the description of water. The objective of hydrography is to collect and record about the world's oceans and seas. Hydrography is instrumental in the production of nautical charts for seafarers. It also assists mariners by providing other necessary tools such as tidal predictions, ocean currents, daily up-to-date information about changes related to navigational areas etc. In a wider perspective hydrographers can predict erosion patterns and the evolution of beaches for communities and tourism, and are involved in land-winning and offshore activities. Ghent University hosts, in cooperation with the Institute for Hydrography of the Antwerp Maritime Academy, the English postgraduate course. The postgraduate Hydrography B aims at students with no prior knowledge of hydrography. After successful completion of the course the candidate will qualify as hydrographic surveyor – level B.

## STRUCTURE

The postgraduate course Hydrography B has a duration of minimum one year, depending on previous qualifications and/or work experience. This year equals a total of 60 credits. The academic year is divided into two semesters. Throughout the year students will participate in classes during four theoretical modules. These are alternated with periods of fieldwork in a hydrographic company or institute of choice, to obtain specialised skills in a real work environment. At the end of each semester there are examinations of the finished courses. In May an integrated fieldwork period allows the students to participate in workshops, seminars and company visits. The fieldwork is evaluated by means of a Training Record Book and permanent evaluation. This facilitates monitoring the progress of the candidates and offering assistance when necessary. After successful completion of the theoretical courses and sufficient fieldwork practice, the candidate qualifies as hydrographic surveyor – level B. The evaluation of the fieldwork takes place in September and January of each academic year. The theoretical courses are held at the Antwerp Maritime Academy and at Ghent University. The courses are based on the IHO S-5 Standards and Competences.

## LABOUR MARKET

In the past hydrography was a purely naval concern (e.g. Admiralty Hydrographic Office UK) but since the 1950's hydrography has been used in the offshore and dredging industry. Nowadays hydrographic knowledge is also used ashore, e.g. investigation of the underwater structure of reservoirs and dams. This specialised work is carried out by a hydrographic surveyor. He will not only be involved during preparatory activities but also during execution and follow up actions. Currently Belgium has over 300 hydrographic surveyors. They are employed by both governmental organisations (Flemish Hydrographic Office, Economic Affairs, Flanders Hydraulic Research, the Port Authorities) and the industry (offshore, dredging, underwater project development etc.). Recent research has shown that about 35 new hydrographic surveyors are needed annually in Belgium if the industry is to keep pace with demand. On a global scale the shortage of hydrographic surveyors is even greater. With a Cat. B certificate the hydrographer can independently execute parts of the process and specialise in a certain discipline such as multi beam echo sounder or data processing.

# POSTGRADUATE HYDROGRAPHY B

60 ECTS CREDITS - LANGUAGE: ENGLISH

## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### 1 Na onderzoek van de bekwaamheid van de student om de opleiding te volgen:

- Een diploma van een bacheloropleiding in het academisch onderwijs
- Een diploma van een bacheloropleiding in het professioneel onderwijs

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

In order to be eligible, candidates require the following qualifications as a minimum: • Bachelor's degree or equivalent • Good knowledge of mathematics: differential and integral calculus, matrix algebra, co-ordinate geometry (2 and 3 dimensional), spherical trigonometry, theory of errors, functions, series, complex variables • Good knowledge of physics: units of measure, mechanics, signal modulation, measurement of time, electricity and magnetism, optics, transducers, pressure, electronics.

Candidates may be eligible for exemptions. Exemptions are dependent on the candidate's qualifications and must be approved by the Selection Committee. See <https://www.hzs.be/nl/andere-opleidingen/hydrography/introduction> for more details.

Information on admission requirements and the administrative procedure for admission on the basis of a diploma obtained abroad, can be found on the following page: [www.ugent.be/prospect/en/administration/enrolment-or-registration](http://www.ugent.be/prospect/en/administration/enrolment-or-registration).

## LANGUAGE REQUIREMENTS

Language requirements Dutch: no language requirements  
English: CEFR level B2

## PRACTICAL INFORMATION

### Study programme

[studiekiezer.ugent.be/postgraduate-hydrography-b-en/programma](http://studiekiezer.ugent.be/postgraduate-hydrography-b-en/programma)

### Information sessions

#### EVOLV

[evolv.gent/en/students/further-studies](http://evolv.gent/en/students/further-studies)

### Enrolling institution

Antwerp Maritime Academy

### Application Deadline (for International degree students)

Before the application can be started up, you need to be pre-academically selected by the programme coordinator

### Tuition fee

More information is to be found on: [www.ugent.be/tuitionfee](http://www.ugent.be/tuitionfee)

### Contact

#### Antwerp Maritime Academy (Hogere Zeevaartschool)

Capt. Axel Annaert  
[axeLannaert@hzs.be](mailto:axeLannaert@hzs.be)

#### Ghent University

Faculty of Sciences  
Geography Department  
Prof. dr. ir. Alain De Wulf  
T +32 (0)9 264 46 87  
[alain.dewulf@ugent.be](mailto:alain.dewulf@ugent.be)

<https://amacademy.be/en/education/hydrography>