Join us to help resolve global and local water challenges

The recently issued 6th IPCC report confirms the increase of extreme climate events, many of which involve excess water or lack of it. Meanwhile, the 2030 target date for achieving the Sustainable Development Goals, including the availability of clean water and sanitation, is fast approaching and accelerated action is needed by all countries if they are to be attained.

We strongly believe that capacity development, including education and training, is key to addressing today’s water challenges. Together with our partners, we continuously develop our curricula and methods of delivery; online, on-campus and blended, to meet the diverse needs of water professionals worldwide. The new MSc in Water and Sustainable Development builds on your background and interest, giving you the skills, knowledge and confidence to address the water challenges in your country or region. The programme, based on the latest scientific insights, is designed for those who want to act to resolve water-related challenges. The course, including the research period, is practical and applicable to any water-related challenges you want to address. Flexibility enables you, supported and guided by a coach, to build a programme that will help you achieve your goals.

If you are keen to pursue a career in research or academia, consider choosing our Research MSc in Water and Sustainable Development. Mostly similar for the first eight modules, it then offers in-depth training in academic and research skills and ample time to conduct your research, equipping you for your future career. The Research MSc will start in October 2023, but you can register now to receive further information.

Because today’s water challenges require a holistic approach, we offer you an interdisciplinary setting in which you can actively work with and learn from staff and students in other disciplines.

Why is IHE Delft the place for you? It is part of the UN system: a member of UN-Water, the institute works under the auspices of UNESCO. This means that we are involved in high-level discussions about solving global water problems and in applying solutions at a local scale. Our world-class staff and guest lecturers are—like our students—from very diverse backgrounds. Their vast experience from project work worldwide provide real examples for students. IHE Delft is small and friendly, with a big reputation worldwide and the largest alumni network of water professionals in the world. You will be part of that family after you graduate.

Do you need any more reasons to come and join us at IHE Delft? If you want to contribute to solving global water problems and enhance your career prospects at the same time, IHE Delft is the place for you.

Professor Eddy Moors, Rector
Delft, Netherlands, Europe

IHE Delft is located in the historical centre of Delft, a city of great charm characterized by ancient canals, beautifully kept monuments and historic squares. It is also a young, vibrant city with a large student population and an ideal starting point to explore the Netherlands and Europe.

A home in the heart of Europe

Delft is known for its historic town centre with canals, Delft Blue pottery, painter Johannes Vermeer and scientist Antony van Leeuwenhoek and its association with the royal House of Orange-Nassau.

Since Delft is a university city, there are plenty of cultural events and an abundance of cafés and restaurants, catering to every taste and making time spent away from your studies enjoyable and relaxing.

Safe cycle paths throughout Delft and the Netherlands provide recreation, exercise and a free means of commuting to IHE Delft from your student accommodation, none of which is far from the Institute.

Water has always played an important role in both the Netherlands’ and Delft’s history.

Delft is well connected to the efficient Dutch public transport system, making The Hague, Rotterdam, Schiphol International Airport and Amsterdam easily accessible. It is a great location to start exploring other places of interest, both within the Netherlands and Europe.

Water has always played an important role in both the Netherlands’ and Delft’s history.

Your international experience

Staff at the Institute simplify your transition to the Netherlands by organizing the annual ‘Introduction Days’. In these two weeks, they help you deal with various formalities such as residence permits, health insurance and bank accounts. Other activities during this period offer opportunities for new students to meet each other and receive the friendship and advice of senior students and the Institute’s staff.

Throughout your study period, IHE Delft organizes social, cultural and sports events, allowing you to get the most out of your free time. You are eligible for a pass to use TU Delft’s sports facilities, including the gym, and to take part in numerous sports and cultural classes. Every year, trips are organized that stimulate you to discover Dutch culture, Delft, the Netherlands and Europe.

The institute’s facilities and services

• Modern teaching and research laboratories in the field/treatment of: wastewater; faecal sludge; drinking water; process technology; aquatic ecology; analytical techniques, including molecular- and microbiological, equipped with state of the art instrumentation;
• A library with online connections to national and international resource centres, and a reading room containing many international journals and magazines;
• Modern classrooms and multifunctional lecture theatres;
• A fully equipped auditorium seating 300 and a videoconferencing studio;
• Laptops for all participants, strong Wi-Fi and extensive computing facilities;
• Flexible and group work-spaces;
• A restaurant offering a wide variety of meals and snacks;
• Social and cultural activities, sports facilities and events;
• International student health and counselling services;
• An in-house prayer and meditation room.

Housing

Delft is a university city, and therefore accommodation is scarce and expensive. This is why IHE Delft provides fully furnished accommodation in Delft for all students of the Institute’s Delft-based programmes, available upon arrival and for the duration of the study period. Advice and assistance will be provided to students of all other programmes.
A Network for Life

Many alumni say ‘it transformed my life’ when describing their experience of studying at IHE Delft. They talk about learning from each other, as well as from the world-renowned teaching staff. They loved their exposure to other cultures and disciplines among the staff and student body and the fact that they built a network for life – the largest water professional network in the world.

Make IHE Delft your network

IHE Delft acts as a hub for partnerships and networks across the globe, linking global knowledge to local sector agendas. The Institute collaborates with a wide range of public and private partners, comprising a wide range of fields and technical cooperation in human and institutional capacity building. These partners, at the international, United Nations, EU and national levels, include education and research centres, the (Dutch) Water Sector, funding agencies, NGOs and governmental organizations. These partnerships add value to many of the Institute’s activities. The Institute maintains close working relationships with many regional and local networks, which facilitates the transfer of scientific and technical expertise, and strengthens the capacity of water professionals and institutions. Many of these networks are thriving professional communities, encouraging joint research, knowledge sharing and the development of sustainable water solutions.

As a student, you profit from the professional contacts the Institute has made since its inception. When studying at IHE Delft, you can expect to learn from leading figures from the international water arena. Your professors and lecturers will put your study in the context of global dialogues and targets such as the Sustainable Development Goals.

Alumni network

After graduation, you will be part of the largest network of water professionals in the world. IHE Delft will continue to facilitate the communication between you, your former classmates, and the Institute. You will receive news about the Institute and the water sector on a regular basis through e-newsletters. You are encouraged to join the IHE Delft Alumni group in your country, where you can meet fellow alumni and enjoy social and professional activities.

With an IHE Delft degree you will have taken a major step in your professional career. Many alumni reach prominent positions in which strategic, managerial, policy and decision-making components become major responsibilities of their functions. You will, over time, wish to keep your skills and knowledge refreshed, to stay up to date with changing professional demands. As part of their lifelong learning programme, IHE Delft offers online and face-to-face courses and seminars, covering themes of direct relevance to different regions. Alumni are entitled to discounts on the tuition fee for attending IHE Delft short and online courses and purchasing publications.
Everyone who decides to study at IHE Delft has their individual motivation, but all wish to contribute to solving water challenges in some way. How you achieve this and meet your career goals will depend on your disciplinary background and professional interests. Our two unique MSc Programmes can help you get there.

MSc Programmes

MSc in Water and Sustainable Development

The one-year (68 EC) MSc in Water and Sustainable Development is designed so that you can either focus on your chosen subject within one of the four thematic tracks: Water Hazards, Risks and Climate; Water and Health; Water, Food and Energy; and Water Resources and Ecosystem Health and study it from different perspectives (profiles): Engineering and Hydrology, Governance and Management, Environment or Digital Innovation. Alternatively, you can combine profiles from different tracks to build your customized programme, to meet your specific interest and needs.

You will write a thesis to complete your MSc – a mentor will help you develop the proposal and support you through the writing process. Interwoven throughout the programmes is a series of professional skills sessions, such as science communication, group dynamics and leadership, which will further support you in your career development.

Research MSc in Water and Sustainable Development

If you are interested in a career in research or academia, you may prefer the two-year (120 EC) Research MSc in Water and Sustainable Development. It follows a similar trajectory for the first year, with a variation in course work, to reflect the emphasis on accumulating research skills. In the second year, you will focus on conducting your research, with additional training in science philosophy, research techniques and academic writing, amongst other relevant topics.

The Research MSc will start in 2023. For more information and instructions on how to pre-register, see page 20 and 21.

KEY FEATURES

Customized study trajectories
The programmes offer maximum flexibility to customize study trajectories to individual learning needs and career opportunities.

Active coaching
Coaches support students in building their customized programme and provide study advice throughout the programme.

Interdisciplinary
Learning activities within the programmes encourage multidisciplinary collaborations and engage students with interdisciplinary approaches.

Problem–orientated curricula
The programme offers problem–orientated curricula based on actual water-related challenges that engage students in critical and innovative thinking, to be able to handle future challenges.

Professional skills
The programme stimulates the development of (inter)personal and cognitive competences, necessary to create a well-rounded professional, confident in communicating, persuading and providing leadership.

Lifelong learning
Continued learning after graduation is encouraged through online courses, webinars, refresher courses and other activities provided for alumni.

Graduate education at IHE Delft is science-based and highly relevant for those interested in water and development.
MSc in Water and Sustainable Development

If you seek a science-based MSc degree that is anchored in professional practice, the MSc in Water and Sustainable Development is ideal for you.

This programme targets early and midcareer water professionals with a recognized Bachelor’s degree, who have the ambition to gain knowledge and skills to tackle water challenges while enhancing their career opportunities within the water sector or related organizations.

The one-year duration keeps the time away from work and home to a minimum. The programme allows you to stay connected with the sector and/or your employer through the option of co-designing the thesis topic. The programme’s curriculum consists of common parts, thematic track modules and a thesis research part. The contents of the common parts are the same for all students, whereas the thematic track modules and MSc thesis research are part of a customized learning trajectory based on your personal learning ambitions.

Academic calendar
Master of Science in Water and Sustainable Development

Common parts

An important characteristic of the MSc Programme is its orientation towards professional practice. Besides disciplinary and interdisciplinary knowledge of the water field, the programme emphasises the development of transferable skills, academic as well as non-academic.

The track modules are interspersed with so-called mixed weeks, in which one or two days are reserved for exams, half a day for portfolio development and coaching, while the remaining days are dedicated to skills training.

In the interdisciplinary project (module 8), you make a preliminary analysis, from an interdisciplinary perspective, of a water-related problem, work in teams to formulate possible solutions and propose measures to address the identified problems, threats and opportunities.

Thematic track modules

After the joint start in module 1, you follow six modules based on your personal learning objectives and academic background. For the ease of guiding students, these modules are grouped in four closely connected and partly overlapping thematic areas. The broad thematic areas are based on societal water challenges and build on the available teaching and research expertise within IHE Delft. Within the thematic track, you can choose a disciplinary profile.

This programme will start in November 2022 — for more information and instructions on how to apply visit www.un-ihe.org/master
Food and energy production requires substantial amounts of water. At the same time, water scarcity and the decline of ecosystems threaten equitable access to food and energy.

What will I learn?
You will examine water related linkages between food and low-carbon energy production, critically assessing possible trade-offs and synergies. Integrated approaches for land and water management will be considered in the broader context of land tenure and water reform processes, relating this to markets, technologies and social justice. You will learn to critically analyse how changes in water and land allocation, to produce food and energy, shape processes of rural transformation and livelihoods of different groups in society. Depending on the profile you choose, you will learn to develop appropriate governance mechanisms and digital innovations; plan, design, operate and maintain irrigation infrastructure or develop and integrate new and existing forms of water-based energy, amongst many other subjects. In summary, this track aims for society’s transformation to more sustainable and equitable practices.

Is it right for me?
Whether your goal is to excel as an irrigation or energy engineer, to work in policy development, as a computer modeller for water or energy use or to pursue many other careers in the field of water, food and energy, this track will give you a head start.

Helped by your coach, you choose from disciplinary profiles (see diagram below), allowing you to focus on a specific aspect of the track or to mix and match (also across tracks), to give you a broader view of the topic.

Check our website to see a list of eligible bachelor degrees and the recommended preparatory courses.
**What will I learn?**

There are three main components to this track: describing and quantifying spatiotemporal climate risks; developing fit-for-purpose adaptation pathways and associated measures and defining appropriate approaches in governance, engineering and information. Depending on your interest, you might focus on cities, river basins, coastal or dryland areas, that all come with their own particular climate challenges. Depending which profile you choose, amongst a wide range of other topics, you will learn about water sensitive cities and sustainable urban drainage; climate adaptation policies, water conflicts and financing; drought and flood management; artificial intelligence and decisions support systems or about sea level rise and coastal adaptation in rapidly urbanizing deltas.

**Is it right for me?**

Whether your dream is to become a chief resilience officer, an adaptation expert in a water agency or consultancy, an expert on nature-based solutions, a policy advisor, a risk modeller or a designer of participatory adaptation approaches, this track will give you a head start.

Helped by your coach, you choose from disciplinary profiles (see diagram below), allowing you to focus on a specific aspect of the track or to mix and match (also across tracks), to give you a broader view of the topic.

Check our website to see a list of eligible bachelor degrees and the recommended preparatory courses.

---

**Climate change dominates the headlines. To adapt, you need to understand the scale and the characteristics of affected regions and people. Join us in this important task.**

**William Veerbeek**  
Senior Lecturer in Flood Resilience  
Water Hazards, Risks and Climate track lead
What will I learn?

This track engages with the direct and indirect linkages between water and health. You will learn how wastewater, drinking water and sanitation relate to urbanization, climate change, human behaviour and aspirations. You will be introduced to the key management and governance dimensions, challenges and solutions. Depending on the profile you choose, you will learn to adequately evaluate, develop, design, and manage sanitation or drinking water provision, including treatment and re-use, transport and distribution, or learn more about the broader technological, socio-economic and public health issues, including management and governance.

Is it right for me?

If your ambition is to become a drinking water expert, or an expert in sewered and non-sewered sanitation, a hygiene or reuse expert, this track will be your springboard. Depending on the profile you choose, you can work for instance in the humanitarian sector, a consultancy firm, water board, drinking water company, environment agency, water inspectorate, or government.

Helped by your coach, you choose from disciplinary profiles (see diagram below), allowing you to focus on a specific aspect of the track or to mix and match (also across tracks), to give you a broader view of the topic.

Check our website to see a list of eligible bachelor degrees and the recommended preparatory courses.

Tineke Hooijmans
Associate Professor of Sanitary Engineering
Water and Health track lead

“The statistics are grim, yet huge progress has been made in improving health through clean water and sanitation provision.”

Associate Professor of Sanitary Engineering
What will I learn?

You will learn about the movement of water through the landscape and how to apply this knowledge to support sustainable management of river basins. You will study the basic concepts and interlinkages in the biosphere, the role of biodiversity, the hydrological cycle, their relationship with ecosystem health and how this underpins human health and wellbeing. Depending on the profile you choose, you will learn about measuring and monitoring, data analysis, GIS and remote sensing, simulation modelling, the value of open access data and software, river basin development and environmental management policy processes, and methods for planning and managing. Ultimately you will be able to apply your expertise to achieve sustainable Water Resources and Ecosystem Health in an interdisciplinary setting.

Is it right for me?

If your ambition is to become a water resources or river basin manager, hydrologist, aquatic ecosystem scientist, modeller or GIS and Remote Sensing expert, or pursue a related career, studying this track will be your springboard.

Helped by your coach, you choose from disciplinary profiles (see diagram below), allowing you to focus on a specific aspect of the track or to mix and match (also across tracks), to give you a broader view of the topic.

Check our website to see a list of eligible bachelor degrees and the recommended preparatory courses.

---

“Water doesn’t just come from a tap: healthy ecosystems provide the resources society needs to survive.”

Graham Jewitt
Professor of Hydrology
Water Resources and Ecosystem Health track lead

---

Globally, ecosystems and the water resources they support are in perilous decline. Maintaining healthy ecosystems is the basis for delivering resources equitably and efficiently to support people’s health and well-being and is the basis for sustainability.

---

What will I learn?

You will learn about the movement of water through the landscape and how to apply this knowledge to support sustainable management of river basins. You will study the basic concepts and interlinkages in the biosphere, the role of biodiversity, the hydrological cycle, their relationship with ecosystem health and how this underpins human health and wellbeing. Depending on the profile you choose, you will learn about measuring and monitoring, data analysis, GIS and remote sensing, simulation modelling, the value of open access data and software, river basin development and environmental management policy processes, and methods for planning and managing. Ultimately you will be able to apply your expertise to achieve sustainable Water Resources and Ecosystem Health in an interdisciplinary setting.

Is it right for me?

If your ambition is to become a water resources or river basin manager, hydrologist, aquatic ecosystem scientist, modeller or GIS and Remote Sensing expert, or pursue a related career, studying this track will be your springboard.

Helped by your coach, you choose from disciplinary profiles (see diagram below), allowing you to focus on a specific aspect of the track or to mix and match (also across tracks), to give you a broader view of the topic.

Check our website to see a list of eligible bachelor degrees and the recommended preparatory courses.

---

“Water doesn’t just come from a tap: healthy ecosystems provide the resources society needs to survive.”

Graham Jewitt
Professor of Hydrology
Water Resources and Ecosystem Health track lead

---

Globally, ecosystems and the water resources they support are in perilous decline. Maintaining healthy ecosystems is the basis for delivering resources equitably and efficiently to support people’s health and well-being and is the basis for sustainability.
Entry Requirements

To get admission to the programme, you should have a Bachelor’s or equivalent degree in a field relevant to the study programme. The degree should be at least equivalent to a UK Upper Second-Class Honours degree or a GPA score of at least 75% of the scale maximum. Relevant work experience can compensate for a slightly lower academic entry level. For each track/profile combination a list of accepted Bachelor’s degrees is available on our website. The admission procedure also includes an English language proficiency check.

In consultation with their coach, students may choose one of the predefined profiles within a thematic track or compose their own tailor-made multi-disciplinary trajectory within or across the thematic tracks. The students below demonstrate how it can work.

Salma has a background in environmental sciences and agriculture and is interested in developing and implementing sustainable water resources management solutions with a focus on ecosystems which produce food. She could follow the environmental profile within the Water Resources and Ecosystem Health track.

Introduction to the theme Water Resources and Ecosystem Health

Hydrology and ecosystems
Water quality assessment and management
Food systems transformation
Wetlands for livelihoods and conservation
Reuse of wastewater for agriculture

Juan has a background in hydrology and is interested in floods in urban areas, hydroinformatics tools and design of climate adaptation measures. He could combine modules of the engineering and digital innovation profiles within the Water Hazards, Risks and Climate track.

Introduction to the theme Water Hazards, Risks and Climate

Analysis of climatic and hydrological variability and change
Geoprocessing in urban water
Flood risk management
Modeling, programming and computational hydraulics
Decision support systems in the water domain

Sajid has a background in civil engineering and wishes to explore the linkages between drainage and sewerage, treatment processes and technologies and the planning, management including financing of treatment plants. This interdisciplinary path within the Water and Health track prepares him to formulate and critically assess inclusive and sustainable management of waste water treatment interventions.

Introduction to the theme Water and Health

Drainage and sewerage
Wastewater treatment processes and technologies
Finance and implementation – value chains
Policy analysis – WattSan and health policies
Change and advocacy – water and sanitation

Rose has a background in public administration and wishes to discover pathways for more equitable and sustainable agricultural and energy policies. This water governance and management profile within the Water, Food and Energy track prepares her to contribute to socially inclusive and environmentally sustainable strategies related to agriculture and/or low-carbon energy.

Introduction to the theme Water, Food and Energy

Rethinking water – irrigation and energy
Organizing water – water users associations, decentralized systems
Institutional analysis of water use practices – land tenure water reform
Policy analyses – agrarian change, biofuels, water reuse
Change and advocacy – grassroot initiatives

Once the admission is final, students interact with a coach to explore which individual study trajectory best fits their learning ambitions.
Research MSc in Water and Sustainable Development

The Research MSc in Water and Sustainable Development will equip and prepare you for a career in research, academia or to pursue a PhD.

**Academic calendar**

Research Master of Science in Water and Sustainable Development

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>2024</td>
<td>2025</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This programme targets early and mid-career water professionals with a recognized bachelor degree who are primarily interested in a career in research or academia and/or would like to pursue a PhD in a water-related area.

During the course of the two-year programme, you will develop academic and cognitive competences to create new knowledge and solutions needed to address complex water challenges in inclusive and sustainable ways.

Because most water problems transcend a single discipline, the programme adopts a multi- and interdisciplinary approach, whilst building a depth of knowledge in your own field of interest. Thus, to prepare you for a career in research or a PhD, solid research skills such as critical thinking, critical reading, scientific writing, intellectual openness and science ethics are part of the curriculum.

This programme will start in November 2023 – for more information and instructions on how to pre-register visit [www.un-ihe.org/researchmaster](http://www.un-ihe.org/researchmaster)
The PhD programme is at the core of water-related research at IHE Delft. PhD fellows undertake scientific research, often with conclusions that directly relate to water challenges in their own country or region. At IHE Delft, close to 100 PhD researchers from around the world are brought together to participate in problem-focused, solution-orientated research into development issues, resulting in an inspiring research environment.

PhD Programme

Conducting research at IHE Delft is a unique experience, as you will work together with other researchers in an international and multidisciplinary environment. Your research will provide a firm academic foundation for you to help solve the global challenges of sustainable water supply, quality and governance. The PhD research of IHE Delft crosses the spectrum from engineering, information systems, habitat quality and the social and political realities that affect the use and abuse of water. All PhD fellows work within specific Chair Groups, but are encouraged to collaborate internally and externally to produce high-quality results within IHE Delft’s research themes. Work often is conducted within larger groupings and can link to the research topics that are a requirement of the institute’s MSc programme and/or embedded in larger multidisciplinary projects. You will often do research in collaboration with the Institute’s extensive network of research institutions, governmental and private sector partners throughout the world. Research often includes time in Delft and abroad, mostly in the home country of the research fellows. This directly supports the mission of the Institute and the agenda of the UN Sustainable Development Goals.

All PhD fellows are registered both with the IHE Delft Graduate School and with a partner university. This is normally a Dutch university with the legal authority to award the degree of PhD, although we also have some joint PhD programmes as part of funded networks of research. The time span of a PhD programme is usually planned for four years. The degrees are fully recognised in all parts of the world.

PhD programme

Sustainable water use is frequently characterised by complex, so-called ‘wicked’, problems where traditional assumptions of knowledge, causality and predictability may not apply. The urgent need to better connect between science, policy and society makes new demands on PhD graduates, who are increasingly expected to be experts in their own disciplines while also being capable of placing that knowledge in a wider understanding of societal needs.

IHE Delft supports PhD level education that is targeted to water related problems, not only in the global south and countries in transition, but in an increasingly globalised world.

In 2015, IHE Delft established the Graduate School in Water and Development to create a hub for a vibrant and intellectually exciting research and development environment at the heart of the Institute. The Graduate School aims to develop a stimulating research environment for PhD fellows and the Institute’s staff. PhD Fellows produce the majority of the research output of the Institute, and future developments are to further support academic quality and relevance in meeting the serious challenges of sustainable water use. Research activities are supported by an individual training plan that build competencies directly related to the specific research programme, as well as wider interactive and awareness skills that are needed in a professional environment. Each PhD fellow develops his/her Training and Supervision Plan (TSP) that builds verified doctoral education credits.

Sustainable water use is frequently characterised by complex, so-called ‘wicked’, problems where traditional assumptions of knowledge, causality and predictability may not apply.
Online and Short Courses

IHE Delft aims to make water education accessible to an increasing number of students and professionals. The Institute therefore offers online and on-campus short courses, tailor-made training, a diploma programme and open courseware on a wide array of topics.

Tailor-made training

Tailor-made courses are designed for clients whose staff require training in specific topics or seek to develop a common knowledge-base to address future challenges. The focus of the courses can be technical, managerial, strategic or operational, depending on the client’s priorities. The training can be organized for groups of various sizes, from one or multiple organizations, sectors or regions. The training can vary in length and depth, ranging from a course lasting several days, to a tailored MSc programme in which regular components are mixed with case studies and modules requested by the client. Training can be delivered online, on-site and/or at IHE Delft. Training techniques include lectures, workshops, role-plays, case studies and study tours to project sites in Europe or in other regions where the training takes place.

For advice on how IHE Delft could be of service to your organization, contact IHE Delft’s Liaison Office. Their contact information is available from the website, see bottom of page.

Graduate Professional Diploma Programme

The Graduate Professional Diploma Programme (GPDP) disseminates relevant knowledge and know-how to professionals who do not have the means or time to pursue a full-time Master’s course in that subject, or who already have an MSc Degree in a related field and wish to specialize in another. In the programme you will follow a sequence of four to five online courses, on-campus short courses or a combination of both. To ensure that the programme fits your personal circumstances, you select the courses of interest and a personal study plan will be designed in collaboration with a study advisor. The total duration of the programme depends on this study plan and varies between 1.5 to a maximum of 4.5 years.

For information on these tracks and courses, see page 27.

Open Courseware

IHE Delft provides free online educational materials, including recorded lectures and downloadable materials such as course notes, exercises, tools and public domain software on a wide variety of topics.

For a list of open courseware courses, see page 29.
Joint MSc Programmes

Water Cooperation and Diplomacy is a multiple-degree joint MSc programme offered by IHE Delft, University of Peace (UPeace) in Costa Rica and Oregon State University (OSU) in the United States of America. Students start at UPeace, where they have four months of course work prior to coming to IHE Delft. They participate in IHE Delft’s modules 3 to 7, and do an extra module on Interdisciplinary Research, before moving to OSU for course and fieldwork and thesis research. www.waterdiplomacymaster.org

Water Science and Engineering in Hydropower Development is a double-degree joint MSc programme offered by IHE Delft and University of Kuala Lumpur (UniKL) in Malaysia. Students start at IHE Delft and complete all modules up to and including module 8, and do an extra online module on Environmental Flows, before moving to UniKL for course and fieldwork and thesis research. www.un-ihe.org/jointprogrammes

Limnology and Wetland Management is a joint-degree MSc programme, offered by IHE Delft, University of Natural Resources and Life Sciences (BOKU) in Austria and Egerton University (EGU) in Kenya. Students start at BOKU, where they have four months of course work prior to coming to IHE Delft. They participate in IHE Delft’s modules 5 to 8, before moving to Egerton University for course and fieldwork and thesis research. www.un-ihe.org/jointprogrammes

IHE Delft is involved in two different Erasmus Mundus Joint Master Degree programmes, focusing on solutions for global water issues such as environmental degradation, floods and droughts.

Groundwater and Global Change – Impact and Adaptation is a multiple-degree joint MSc programme offered by IHE Delft in cooperation with the Technical University of Dresden in Germany and the University of Lisbon in Portugal. Students start at University of Lisbon before coming to IHE Delft for the 2nd semester, and then move to Technical University of Dresden for the 3rd semester. In the final semester, students undertake a thesis research project in association with one of the abovementioned institutions and possibly external partners. www.groundwatermaster.eu

Flood Risk Management is a multiple-degree joint MSc programme offered by IHE Delft in cooperation with the Technical University of Dresden in Germany, UPC Barcelona in Spain and University of Ljubljana in Slovenia. Students start at Technical University of Dresden in Germany before coming to IHE Delft for the 2nd semester, and then move to UPC Barcelona and University of Ljubljana for the 3rd semester. In the final semester, students undertake a thesis research project in association with one of the abovementioned institutions and possibly external partners. www.floodriskmaster.org

At the time of writing three other Erasmus Mundus programmes with IHE Delft's involvement were under review by the European Commission and may be added to the current offer of joint programmes starting in 2022. Check our website for the latest info.

www.waterdiplomacymaster.org

Graduate Professional Diploma Programme

Online Courses (OLC)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>ECTS</th>
<th>Duration (weeks)</th>
<th>Starting date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Wastewater Treatment: Principles, Modelling and Design</td>
<td>5</td>
<td>18</td>
<td>02/Oct/22 - 11/Dec/22</td>
<td></td>
</tr>
<tr>
<td>Remediation, Adsorption and Natural Processes for Wastewater Treatment</td>
<td>5</td>
<td>18</td>
<td>02/Oct/22 - 11/Dec/22</td>
<td></td>
</tr>
<tr>
<td>Fiscal Sludge Management</td>
<td>5</td>
<td>18</td>
<td>02/Oct/22 - 11/Dec/22</td>
<td></td>
</tr>
<tr>
<td>Urban Drainage and Sewerage</td>
<td>5</td>
<td>18</td>
<td>02/Oct/22 - 11/Dec/22</td>
<td></td>
</tr>
<tr>
<td>Water and Sanitation in Urban Humanitarian Context</td>
<td>5</td>
<td>18</td>
<td>17/Oct/22 - 28/Nov/22</td>
<td></td>
</tr>
<tr>
<td>Waste and Environmental Use and Policy</td>
<td>5</td>
<td>18</td>
<td>17/Oct/22 - 28/Nov/22</td>
<td></td>
</tr>
<tr>
<td>Experimental Methods in Wastewater Treatment</td>
<td>5</td>
<td>12</td>
<td>25/Apr/22 - 01/Jun/22</td>
<td></td>
</tr>
<tr>
<td>Building Resilient Systems in Fragile Contexts</td>
<td>5</td>
<td>18</td>
<td>02/Apr/22 - 07/Sep/22</td>
<td></td>
</tr>
<tr>
<td>Abundance in Humanitarian Contexts</td>
<td>5</td>
<td>18</td>
<td>02/Apr/22 - 07/Sep/22</td>
<td></td>
</tr>
<tr>
<td>Industrial Resource Management and Cleaner Production</td>
<td>5</td>
<td>18</td>
<td>02/Apr/22 - 07/Sep/22</td>
<td></td>
</tr>
<tr>
<td>Modelling Sanitation Systems</td>
<td>5</td>
<td>18</td>
<td>02/Apr/22 - 07/Sep/22</td>
<td></td>
</tr>
<tr>
<td>Constructed Wetlands for Wastewater Treatment</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Desalination and Membrane Technology</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Environmental Flows</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Industrial Efficient Treatment</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Irrigation Management and Development</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Public and Environmental Health in Emergencies</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Remote Sensing for Agricultural Water Management</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Solid Waste Management</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Water and Environmental Policy Analysis</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Water Resources for Agriculture</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
<tr>
<td>Water Transport and Distribution</td>
<td>5</td>
<td>18</td>
<td>02/Sep/22 - 18/Oct/22</td>
<td></td>
</tr>
</tbody>
</table>

Dates are subject to change - please check the website for updates.

Online Courses 2022

Advanced Water Transport and Distribution
Analysis of Sanitation Flows
Biological Wastewater Treatment
Building Resilient Systems in Fragile Contexts
Constructed Wetlands for Wastewater Treatment
Desalination and Membrane Technology
Disinfection, Adsorption and Natural Processes for Wastewater Treatment
Experimental Methods in Wastewater Treatment
Fiscal Sludge Management
Governance in Humanitarian contexts
Industrial Efficient Treatment
Industrial Resource Management and Cleaner Production
Irrigation Management and Development
Modelling Sanitation Systems
Project Management
Public and Environmental Health in Emergencies
Public Health
Sanitation Financing
Sanitation Governance
Sanitation Financing
Sanitation Systems
Sanitation Technology
Solid Waste Management
Urban Drainage and Sewerage
Integrated Water Management and Disaster Risk Mitigation
Water and Sanitation in Urban Humanitarian Contexts
Water Transport and Distribution

Participants select four or five courses among clusters belonging to seven different tracks. Eligible courses per track are listed in the scheme above. A full list, including eligible short courses, is available from the website, see bottom of page.

*New course currently being developed - please check the website for the latest information

Joint MSc Programmes

Water Cooperation and Diplomacy is a multiple-degree joint MSc programme offered by IHE Delft, University of Peace (UPeace) in Costa Rica and Oregon State University (OSU) in the United States of America. Students start at UPeace, where they have four months of course work prior to coming to IHE Delft. They participate in IHE Delft’s modules 3 to 7, and do an extra module on Interdisciplinary Research, before moving to OSU for course and fieldwork and thesis research.

www.waterdiplomacymaster.org

Water Science and Engineering in Hydropower Development is a double-degree joint MSc programme offered by IHE Delft and University of Kuala Lumpur (UniKL) in Malaysia. Students start at IHE Delft and complete all modules up to and including module 8, and do an extra online module on Environmental Flows, before moving to UniKL for course and fieldwork and thesis research.

www.un-ihe.org/jointprogrammes

Limnology and Wetland Management is a joint-degree MSc programme, offered by IHE Delft, University of Natural Resources and Life Sciences (BOKU) in Austria and Egerton University (EGU) in Kenya. Students start at BOKU, where they have four months of course work prior to coming to IHE Delft. They participate in IHE Delft’s modules 5 to 8, before moving to Egerton University for course and fieldwork and thesis research. www.un-ihe.org/jointprogrammes

IHE Delft is involved in two different Erasmus Mundus Joint Master Degree programmes, focusing on solutions for global water issues such as environmental degradation, floods and droughts.

Groundwater and Global Change – Impact and Adaptation is a multiple-degree joint MSc programme offered by IHE Delft in cooperation with the Technical University of Dresden in Germany and the University of Lisbon in Portugal. Students start at University of Lisbon before coming to IHE Delft for the 2nd semester, and then move to Technical University of Dresden for the 3rd semester. In the final semester, students undertake a thesis research project in association with one of the abovementioned institutions and possibly external partners.

www.groundwatermaster.eu

Flood Risk Management is a multiple-degree joint MSc programme offered by IHE Delft in cooperation with the Technical University of Dresden in Germany, UPC Barcelona in Spain and University of Ljubljana in Slovenia. Students start at Technical University of Dresden in Germany before coming to IHE Delft for the 2nd semester, and then move to UPC Barcelona and University of Ljubljana for the 3rd semester. In the final semester, students undertake a thesis research project in association with one of the abovementioned institutions and possibly external partners.

www.floodriskmaster.org

At the time of writing three other Erasmus Mundus programmes with IHE Delft's involvement were under review by the European Commission and may be added to the current offer of joint programmes starting in 2022. Check our website for the latest info.

www.un-ihe.org/jointprogrammes

www.un-ihe.org/gpdp

www.un-ihe.org/online-courses
## On-campus Short Courses 2022

<table>
<thead>
<tr>
<th>Title</th>
<th>ECTS</th>
<th>Duration (weeks)</th>
<th>Starting Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Acquisition, Preprocessing and Modelling using HEC-RAS</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Design of Breakwaters</td>
<td>3.5</td>
<td></td>
<td>01/Jul/22</td>
<td>09/Jul/22</td>
</tr>
<tr>
<td>Water Treatment Processes and Plants Design</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Environmental Assessment for Water-related Policies and Applications</td>
<td>3</td>
<td></td>
<td>01/Jul/22</td>
<td>09/Jul/22</td>
</tr>
<tr>
<td>Industrial Resource Management and Cleaner Production</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Integrated Hydrological and River Modeling</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Modelling Wastewater Treatment Processes and Plants</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Water Infrastructure Asset Adoption through Innovations, Interconnections, Realignments and Resilience (I2AIR)</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Environmental Planning and Implementation</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>River Transport and Distribution</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Design of Hydro power Schemes</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Data Analysis and Modeling for Aquatic Ecosystems</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Aquatic Ecosystems Processes and Applications</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Environmental Assessment for Water-related Policies and Developments</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Flood Risk Management</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Industrial Resource Management and Cleaner Production</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>River Transport and Distribution</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Design of Hydro power Schemes</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Data Analysis and Modeling for Aquatic Ecosystems</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Aquatic Ecosystems Processes and Applications</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Environmental Assessment for Water-related Policies and Developments</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Flood Risk Management</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Industrial Resource Management and Cleaner Production</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>River Transport and Distribution</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
<tr>
<td>Design of Hydro power Schemes</td>
<td>3</td>
<td></td>
<td>19/Jul/22</td>
<td>21/Jul/22</td>
</tr>
</tbody>
</table>

Note: Dates are subject to change – please check the website for updates.
IHE Delft is the largest international graduate water education facility in the world and is based in Delft, the Netherlands. Since 1957 the Institute has provided water education and training to 23,000 professionals from over 190 countries, the vast majority from Africa, Asia, and Latin America. Also, numerous research and institutional strengthening projects are carried out in partnership to strengthen capacity in the water sector worldwide.

www.un-ihe.org

The Sustainable Development Goals (SDGs) are important and ambitious goals that guide us at IHE Delft in our work to address water and development challenges. As a water education institute developing capacity in water-related topics, we particularly focus on SDG 6, ‘Clean water and sanitation’. However, our work is also important for other goals: water cannot be seen in isolation and is a precondition for achieving other goals.

Therefore, together with our partners, we contribute to many SDGs including zero hunger, gender equality, affordable and clean energy, life on land, life below water, and sustainable cities and communities. As we approach 2030, IHE Delft will use an inter- and transdisciplinary approach to further strengthen the connections between our education, research and project activities.