

Civil Engineering Water Management

MSc Programme



Without water, life on Earth would be impossible. Yet, water can also be life threatening. Just think of the destructive force of rivers bursting their banks or the risks of polluted drinking water. Therefore, it is crucial to understand this natural element and manage it in the best and most ingenious way possible. The track Water Management teaches you this. It helps you to develop the next ground-breaking innovations in the field of water.

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| Degree | Master of Science |
| Starts | September |
| Type | full-time |
| Credits | 120 ECTS, 24 months |
| Language | English |
| Application deadline | 1 April: International students 1 July: Dutch degree |
| Tuition fee | € 18.750 (non EU) € 2.168 (EU) |
| Scholarships | scholarships.tudelft.nl |

Programme

Worldwide, water problems are increasing. The world's population is growing and with it the demand for fresh water. We are also facing challenges such as climate change and pollution. In the MSc track Water Management, you will acquire the knowledge and develop the skills needed to address these challenges. It focuses on the understanding of surface and groundwater flows and the management, control and utilisation of these flows for society. This comprises flooding, droughts and, for example, urban water supply. Water Management investigates not only the quantity,

but also the quality of surface and groundwater. In the track you will first get an overview of the field and then study in more detail irrigation, groundwater, urban flood management, to name but a few topics. There are many opportunities for going abroad for longer or shorter periods, and if you wish you can follow some of the courses online. The programme has a strong international character. By interacting with other cultures, you learn new ways to generate solutions. And that is exactly what we need to produce ground-breaking solutions for our global water problems.

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| FIRST YEAR | SECOND YEAR |
|---|---|
| TRACK-SPECIFIC COURSES (TOTAL OF 56 EC) <ul style="list-style-type: none"> • COMPULSORY COURSES (15 EC) • SPECIALISATION COURSES (41 EC) | SPECIAL SUBJECTS (CHOOSE ONE) <ul style="list-style-type: none"> • ADDITIONAL GRADUATION WORK, RESEARCH PROJECT (10 EC) • ELECTIVE COURSES (10 EC) • INTERNSHIP (10 EC) • MULTIDISCIPLINARY PROJECT, CIVIL ENGINEERING CONSULTANCY PROJECT (10 EC) |
| COMPULSORY ETHICS COURSE (CHOOSE ONE) <ul style="list-style-type: none"> • CLIMATE CHANGE: SCIENCE & ETHICS (4 EC) • PHILOSOPHY, TECHNOLOGY ASSESSMENT AND ETHICS FOR CIVIL ENGINEERS (4 EC) | ELECTIVE COURSES (10 EC) |
| | MSC THESIS (40EC) |

Specialisations

The water management track has three specialisations:

Hydrology focuses on the occurrence, distribution, movement and properties of the water on Earth and their relationship with the environment. You will learn how to measure, model and predict floods and droughts, precipitation and evaporation processes, and groundwater levels and flows.

Water Resources Engineering focuses on the control and use of water flows. This comprises irrigation systems, polders, urban areas and entire river basins. You will learn how to model these systems, how they are currently managed, and how their management can be improved. This requires technical as well as 'soft' skills.

Urban Water Engineering concentrates on water management in urban areas. Issues studied include urban design and asset management, urban flooding, urban groundwater problems, and the design, management and operation of sewers. Moreover, you will learn the basics of drinking water production and sewage treatment.

Graduation examples

- Origin of rain under climate change: continental moisture recycling
- Safe water for refugee camps
- Hydrological modelling for urban pluvial flooding in Yangon
- Bridging the gap between scientists and decision makers in the Eastern Nile
- Implementation of the Greater New Orleans Urban Water Plan
- Agricultural drought forecasting for the Lower Shire Basin, Malawi.

Career prospects

There is no shortage of jobs in the field of water. Many of our graduates are hired by consultancy companies or water management bodies. Others find employment at water research institutes, NGO's or international organisations. Finally, a significant proportion of our graduates continue in science as PhD candidates at universities all over the world.



11th
in the Shanghai subject ranking
Water Resources 2020



2nd
in QS subject ranking
Civil Engineering 2020



60
first year students in 2020



52%



48%



35%
international students

Career perspective



80%
job within 6 months