



WATER ENGINEERING MASTER OF SCIENCE

The new study program
at TH Lübeck |
University of Applied Sciences

Beginning winter term 2020/21

Water Engineering
Master of Science, M.Sc.
www.th-luebeck.de/WEM



**TECHNISCHE
HOCHSCHULE
LÜBECK**



Students at work

Objectives

The study program in Water Engineering qualifies future experts in all water-related aspects of environmental engineering.

Students will learn:

- the design and planning of hydro-power for renewable energy generation,
- environmentally friendly hydraulic design of rivers,
- modern stormwater retention,
- sustainable urban drainage and water management,
- waste water treatment technologies,
- the design of ecohydrological measures to improve the water quality of water bodies.

There is a special emphasis on hydraulic, hydrological, and groundwater simulation and modeling techniques. Students learn remediation and restoration techniques of water bodies.

The program includes excellent exchange opportunities with European partner universities (Erasmus+) during the third semester.

Key facts

Study degree:	Master of Science, M.Sc.
Study duration:	4 semesters
Beginning of study:	winter term
Form of study:	full-time, presence
ECTS:	120 CP
Specialisation:	water science and engineering
Access requirements:	To apply for this program students must achieve at least a German grade of 2.7 in a civil engineering, renewable energies, environmental engineering or comparable bachelor degree.
Access limits:	This study program has access limits.
Target group:	National and international students with a bachelor degree and main specialisation on water-related topics. Candidates must provide proof of English language skills.

TH Lübeck offers excellent laboratory facilities such as an experimental water treatment plant, a modern hydraulic laboratory as well as laboratories for hydrology and water chemistry. Courses provide insight into ongoing projects, research and development activities in the field of international water engineering.



The international master program in Water Engineering is a modern, consecutive, full-time study program with a duration of four semesters and 120 CP.

Curriculum

Higher Mathematics, Data Science	1. sem.	3 CP
Research Methods		3 CP
Water Regulation		3 CP
Advanced Waste Water Treatment		3 CP
Urban Water Protection		6 CP
Hydraulic Engineering		6 CP
Simulation and Modeling I		6 CP
Geographic Information Systems	2. sem.	6 CP
Applied Freshwater Ecology		6 CP
Sustainable Urban Systems		6 CP
Hydrological Engineering		6 CP
Simulation and Modeling II		6 CP
Erasmus Mobility (elective modules) e.g. University of Lodz University of Antwerp University of Algarve and Erasmus+ partners	3. sem.	30 CP
Master Thesis, 25 weeks	4. sem.	27 CP
Master Colloquium		3 CP

Water Engineering, M.Sc. | 4 semesters | TH Lübeck

Topics

The study program covers five thematic areas:

- 1) advanced scientific methods (programming, modern monitoring techniques, data science),
- 2) water quality (water treatment, groundwater remediation and protection),
- 3) societal challenges related to water with a focus on sustainable urban planning,
- 4) engineering of hydraulic and hydrological systems,
- 5) simulation and modeling of water systems.



Holstentor, city landmark

The Hanseatic City of Lübeck

Founded in 1134, the Hanseatic City of Lübeck is situated near the Baltic Sea. With its approximately 210.000 inhabitants, it is a center of commerce, industry, and higher education that is playing an increasingly important role in bringing together the people of Denmark, Sweden, Finland, Russia, the Baltic States and Poland. Much of its architecture, dating back to the Middle Ages, is still intact in the older portion of town, which is a UNESCO World Heritage Site. With its many restaurants, cinemas, theaters, and clubs, the city offers a variety of recreation opportunities for young people. Lübeck offers a lively art scene, plays host to Northern Film Days and is the main venue for the world-famous Schleswig-Holstein Music Festival. Because of its closeness to the Baltic Sea, Lübeck offers a wide variety of cultural and sporting activities.

Lübeck is surrounded by the rivers Trave and Wa-kenitz and is embedded in a beautiful, partly forested landscape. The UNESCO Biosphere Reserve Schaalsee, a green belt of lakes offers many opportunities for studying aquatic environments and for enjoying time in nature.

Aerial view of Lübeck





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