

## Overview of the Degree Program

### ✓ Degree

Master of Science (M.Sc.)

### ✓ Regular Program Length

4 semester (full-time program)

### ✓ Credit Points (ECTS)

120 credit points

### ✓ Language of Instruction

English

### ✓ Admission Requirements

- » a completed bachelor's or equivalent degree in engineering such as civil engineering, environmental engineering, chemical or bio engineering or in natural sciences such as geoecology, environmental sciences or geosciences or a bachelor's degree in a related field with the same topics
- » necessary minimum requirements in
  - ▶ advanced mathematics, minimum of 12 credit points
  - ▶ science and/or engineering fundamentals such as physics, chemistry, biology, mechanics or thermodynamics, minimum of 12 credit points
  - ▶ engineering and/or natural sciences such as water management, hydraulic engineering, hydrology, urban water management, hydromechanics, water treatment, hydrogeology, engineering geology, geophysics, physical geography, soil science, environmental systems sciences, climatology and/or hydrometeorology, minimum of 12 credit points
- » interview necessary
- » proof of sufficient knowledge of English of at least B2 level

Details can be found in the current admission regulations.

### ✓ Limited Capacity

yes

### ✓ Application Deadline

June 15 / November 30 for the 1st semester

## Questions?

If you have **general questions** about the degree program, studying at KIT or the **application process**:

Annette Hildinger, your student advisor at ZSB:

[annette.hildinger@kit.edu](mailto:annette.hildinger@kit.edu)

If you have **specific questions** concerning the curriculum of the degree program:

Dr. Cansu Schmunk, your academic advisor at the KIT-Department of Civil Engineering, Geo and Environmental Sciences: [watscieng@bgu.kit.edu](mailto:watscieng@bgu.kit.edu)

Information in this flyer was accurate at the time of printing. Program structure, study plan or deadlines could have changed since then.

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Water Science and  
Engineering

Master of Science

ZSB

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The Karlsruhe Institute of Technology (KIT), a fusion of a university and a large-scale research facility, represents one of the leading research and teaching institutions in Europe in natural science and engineering. Students who choose to study here opt for a scientific education that is predominately research-oriented. The wide range of offered subjects provides a high level of freedom of choice and individual specialization options in the master's degree programs. The particularly high qualification standards at KIT are known among employers and thus offer graduates a well-paved road into starting a professional career or continuing with a doctorate.

## Water Science and Engineering (M.Sc.)

The master's program in Water Science and Engineering offers an interdisciplinary, research-oriented education at the interface of water-related engineering and natural sciences. Graduates are able to independently develop strategies and technical solutions for the sustainable management of water resources. In doing so, they are active in the complex area of conflict between the efficient use of limited water resources, the increasing demands for their protection, the handling of extreme hydrometeorological events and the effects of global change on the water cycle and water-related material cycles.

Advanced Fundamentals teaches the advanced principles of water-related engineering and science. All students sit in on a lecture series on environmental systems modeling, among other topics. The specialized scientific training is flanked by in-depth knowledge of cross-cutting methods and cross-cutting skills.

The specialization area consists of the three profiles:

- » Water Technologies & Urban Water Management
- » Fluid Mechanics & Hydraulic Engineering
- » Hydrological Dynamics & Hazards

## Career Prospects

Environment sustainable using - Water Technologies and sustainable Water Management Concepts

In line with the broad field of activities, water engineers are sought-after specialists with excellent career prospects. Graduates with a master's degree can be found in leading positions in various industries: engineering offices, industrial companies, public administration, development cooperation, or research and development. Water engineers analyze, design, plan, calculate, build and manage in order to meet current and future challenges in the water sector and to find solutions. They mainly deal with concepts and installations in the fields of environmental protection, resource management and disaster prevention, for example irrigation and drainage systems, wastewater treatment, drinking water production, flood protection, and many others. The master's degree also lays the foundation for a subsequent doctorate.

## Characteristic Features of the Degree Program at KIT

- » carefully balanced combination of lectures, tutorials and internships
- » training in data analysis and numerical modeling using common programming languages
- » study work in small, well supervised groups
- » large percentage of practical experience (exercises, project work)
- » research-oriented teaching through active involvement in research and engineering projects
- » integration in the Eucor university alliance offers participation in classes at the universities in Freiburg, Basel, Strasbourg, Colmar and Mulhouse

## What KIT has to offer

- » central campus close to the city forest and right next to the city center
- » 24/7 library offering single and group working places
- » wide range of inexpensive catering options on campus (dining hall, cafeteria, Koerierwerk and Pizzawerk)
- » numerous interdisciplinary offers for personal and professional development
- » study abroad, e.g. Erasmus
- » excellent university sports facilities with a large selection of sports
- » comprehensive cultural offerings such as university orchestra, choirs and theater groups
- » extensive support for career entry and self-employment
- » internationally oriented degree programs and diverse exchange programs
- » modern laboratories and practical teaching methods
- » diverse student initiatives, clubs and opportunities to actively participate in campus life



## Program Structure

1st to 3rd semester			4th semester
<ul style="list-style-type: none"><li>• <b>Profile Studies:</b><ul style="list-style-type: none"><li>• Modules in Advanced Fundamentals (27 LP)</li><li>• Modules in Specialization (24 LP)</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>Supplementary Studies:</b><ul style="list-style-type: none"><li>• Modules in Cross-Cutting Methods and Competencies (12 LP)</li><li>• Modules in Supplementaries (12 LP)</li></ul></li></ul>	<ul style="list-style-type: none"><li>• <b>Study Project (15 LP)</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Master thesis (30 CP)</b></li></ul>