

## 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 Instructions

English

### ✓ Admission Requirements

- » a completed bachelor's or equivalent degree in the fields of physical-natural sciences, engineering-information technology and especially geodesy or geoinformatics-affine or geoscientific fields
- » necessary minimum requirements completed in the bachelor program in
  - ▶ mathematics, statistics, physics and / or mechanics of 25 credit points
  - ▶ (geo) computer sciences, image processing, remote sensing, photogrammetry, geosciences, geodesy and / or cartography of 30 credit points
- » proof of sufficient knowledge of English of at least B2 level
- » letter of motivation

Details are 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. Michael Mayer, your academic advisor at the KIT-Department of Civil Engineering, Geo and Environmental Sciences: [michael.mayer@kit.edu](mailto:michael.mayer@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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Remote Sensing and  
Geoinformatics

Master of Science

 ZSB

## Karlsruhe Institute of Technology

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.

## Remote Sensing and Geoinformatics (M.Sc.)

The purpose of the master's degree program is to deepen and complement the scientific qualification the student has acquired in a related bachelor's degree program. The program is composed of a balanced combination of lectures, exercises and seminars. The first and second semesters of the two-year program set a common basis in remote sensing and geoinformatics techniques and their applications. At the same time, a selection of one out of six profiles allows for an individual specialization according to the student's interests. Two lab rotations in the third semester offer students detailed insights into the scientific work of self-selected research groups at KIT and beyond, and help them gain hands-on research experience. A six-month master's thesis is completed in the fourth semester. Students are awarded the degree Master of Science (M.Sc.) in Remote Sensing and Geoinformatics upon successful completion of the program. The language of instruction is English. Selected supplementary courses in any language may be chosen from other KIT programs to complement the desired profile of the students.

## Career Prospects

Graduates of the degree program Remote Sensing and Geoinformatics can work in all areas where geodata is surveyed, collected, analyzed, visualized and interpreted by help of modern information technology and digital media: from automobile industry to development of appliances and electronics industry, software development, construction businesses, engineering offices, public administration and agencies to international air and space organisations. Not only is a direct start in a professional career possible, graduates with excellent accomplishments may also choose to do a doctorate which opens the possibility for a future career in research and teaching.



## Characteristic Features of the Degree Program at KIT

- » Future-oriented engineering program (specialization in mathematics and natural science)
- » Interdisciplinary focus, with a specific connection to computer science and geosciences
- » 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
- » Campus close to the city

## Program Structure

1st semester	2nd semester	3rd semester	4th semester
<ul style="list-style-type: none"><li>• <b>Remote Sensing Part 1 (12 CP)</b><ul style="list-style-type: none"><li>• Fundamentals in Remote Sensing, Image Processing and Computer Vision</li><li>• Geoinformatics</li><li>• Remote Sensing of the Atmosphere</li><li>• Fundamentals of Environmental Geodesy</li></ul></li><li>• <b>Compulsory Elective (5 to 10 CP)</b> 1 out of 6 profiles; compulsory as well as compulsory elective modules (part 1)</li><li>• <b>Mathematics and beyond (9 CP)</b></li><li>• <b>Supplementary modules (0 to 4 CP)</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Remote Sensing Part 2 (9 CP)</b><ul style="list-style-type: none"><li>• Geoinformatics</li><li>• Remote Sensing of the Atmosphere</li><li>• Fundamentals of Environmental Geodesy</li></ul></li><li>• <b>Compulsory Elective (10 to 15 CP)</b> 1 out of 6 profiles; compulsory as well as compulsory elective modules (part 1)</li><li>• <b>Mathematics and beyond (8 CP)</b></li><li>• <b>Supplementary modules (2 to 4 CP)</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Lab rotation (20 CP)</b></li><li>• <b>Supplementary modules (2 to 6 CP)</b></li><li>• <b>Interdisciplinary qualifications (4 CP)</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Master thesis (30 CP)</b></li></ul>