

How to apply

Admission

To be admitted to the Master's program Geodata Science, you need 6 CP each in programming, GIS and statistics from your Bachelor's degree. As the program is taught in English, English proficiency at B2 level is required

Tuition fees of 1,500 € per semester apply to non-EU students.

Admission deadlines

Winter semester (start in Sept/Oct): 15 July

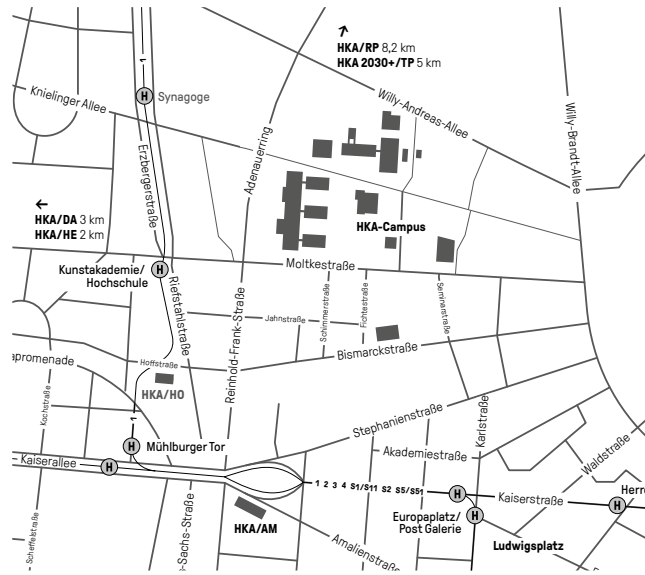
Summer semester (start in March): 15 January

Application process

All applicants, including EU applicants, apply directly at Hochschule Karlsruhe, via the HISinOne platform. Please check our website (linked at the bottom of this page) for further information regarding the process, required documents etc.

Degree

You will complete the degree after 3 semesters (90 CP) with the degree "Master of Science" (M. Sc.). In Germany, the M.Sc. degree opens the door to a career in senior civil service ("Höherer Verwaltungsdienst"). The M.Sc. also qualifies graduates to pursue a Ph.D.



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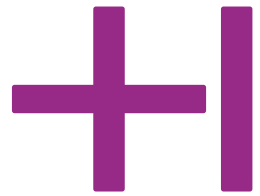
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und Medien



Geodata Science

Master



Further information:
www.h-ka.de/gdsm

The program

Geodata Science

Geodata Science reveals what remains hidden at first glance. It helps us better understand our planet and develop solutions to current challenges – for example, in identifying suitable locations for wind turbines, in the early detection and monitoring of wildfires, in the planning of transportation routes, or in flood protection. Through the interplay of geosciences and computer science, a wide variety of data can be integrated to understand and model its dynamics.

International and interdisciplinary

The international master’s program in Geodata Science at Hochschule Karlsruhe combines theoretical knowledge with practical application in small groups. The program focuses on projects involving various types of big geodata, such as satellite data, social media data, statistical data, sensor/IoT data, and data from simulation models. In addition, “Free to Choose” credits allow students to take courses in other disciplines at Hochschule Karlsruhe, thereby receiving an interdisciplinary education.

In demand

In a world of growing uncertainty, (geo-) data specialists are highly in demand – both nationally and internationally, in the private sector as well as at government and academic institutions. Our alumni work in environmental management and monitoring, disaster prevention, infrastructure and utility planning, geomarketing and geobusiness, logistics and supply chain optimization, risk modeling, development of GIS systems, WebGIS, geodata platforms or databases, and in research and development.



Study Contents

The curriculum features both mandatory and elective modules. Mandatory modules cover the theoretical foundation of the subject as well as scientific skills such as academic writing and working with Generative AI. Elective modules focus on project-based applied learning with one type of data each.

Overview of curriculum

Mandatory Modules	Spatio-temporal Statistics	The GeoWeb
	Open Source GIS	Advanced Software Engineering
	Scientific Skills	Free to Choose Credits
Elective Modules (select 2 per semester)	Project using Social Media Data	Project using Sensor/IoT Data
	Project using Satellite Data	Project using Data Derived from Simulation Models
	Project using Statistical Data	Interdisciplinary Geodata Science Project
	Seminar	
Master Thesis		

The right fit?

What to expect

- + Practical training in small, international groups
- + A curriculum focused on current topics such as AI, climate impacts, the Internet of Things, social media data, and various fields of application (climate, satellite imagery, etc.)
- + Direct contact with professors and faculty
- + Master’s theses in research and development or industry, either domestically or abroad, are possible
- + A region with many employers in relevant fields—for a work-study position during your studies or a direct transition into a job afterward
- + International exchange programs with other universities
- + Support and guidance for students provided by the Central Student Advisory Service or the International Office, for example, when facing challenges during the studies

What you should bring

- + A strong interest in geoscience topics, (geo)informatics, and physics
- + Openness and a willingness to collaborate in international teams
- + The ability to work independently, critical thinking, and a critical approach to AI
- + Good English skills (B2)
- + 6 CP each in programming, GIS, and statistics from your bachelor’s degree