

INTERNATIONAL PROGRAMMES

Table of Contents

Master's degree	2
Geodesy and Geoinformatics • Leibniz University Hannover • Hannover	2

Master's degree



Geodesy and Geoinformatics

Leibniz University Hannover • Hannover











Overview

Degree	Master of Science in Geodesy and Geoinformatics
Teaching language	• English
Languages	The programme is open to German-speaking and international students. We guarantee that international students can complete the degree programme with courses held in English, although there are some elective courses that are offered in German only.
Full-time / part-time	• full-time
Mode of study	Less than 50% online
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	Non-EU applicants: 31 May for the following winter semester 30 November for the following summer semester EU applicants: 15 July for the following winter semester 15 January for the following summer semester
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	Geodesy and Geoinformatics (specialisation Geomatics) is an engineering and geoscience subject based on mathematics and physics and a close affinity to computer science, environmental science, law, and social sciences. Typical questions include engineering and geodetic monitoring of

structures, capturing and use of environmental information, guidance of machines and vehicles, and remote sensing and researching of the system Earth. For geodata captured by modern measurement technology, there are many applications, for example, in regional planning, for location-dependent mobile services and navigation systems.

This wide variety of tasks requires thorough knowledge in individual disciplines that are encountered in the broad spectrum of subjects in the programme of Geodesy and Geoinformatics at Leibniz Universität Hannover. Building on the broad content of the Bachelor's degree, the Master's programme offers students the chance to study numerous specific fields at an advanced level and to specialise in certain disciplines. In particular, current aspects of research and their advanced applications on the basis of selected projects are at the heart of the Master's programme.

Course Details

Course organisation

To do justice to the broad spectrum of the subject and constantly changing needs and methods, the Geodesy and Geoinformatics programme at Leibniz Universität Hannover covers a wide range of subjects.

This programme is distinguished by its practical relevance. Alongside research-oriented theory, projects and seminars are deliberately designed to develop key competencies such as teamwork and problem-oriented actions. This combination makes it possible for graduates to choose from a broad spectrum of employment opportunities.

In the Master's programme (specialisation Geomatics), students pursue independent research and development activities in industry or research institutes. In the first two semesters, there are activities which serve to summarise the basics in six disciplines:

- Engineering geodesy
- Physical geodesy
- Positioning and navigation
- Photogrammetry and remote sensing
- Geographic information systems
- Land and real estate management

Building on the six compulsory modules in **Geodesy** and **Geoinformatics**, students can specialise in one or more specialist area(s) whereby one entire subject area (Geodesy or Geoinformatics) can never be completely deselected. In parallel, there are two project seminars, in which a complex research-oriented task is tackled in small groups.

In an elective module, students are given the opportunity to attend courses from the Leibniz University's entire selection of courses. The submission of a Master's thesis completes academic studies.

A Diploma supplement will be issued

Yes

International elements

- International guest lecturers
- Study trips

Description of other international elements

Possibility to integrate studies abroad with one of our several partner universities

Integrated internships

Internships are not a part of the curriculum. However, it is possible to undertake them individually at all study levels, usually during semester breaks. Due to close relations to industry and to the public sector, internships can be planned by students independently. Support is given by the faculty.

Course-specific, integrated German language courses	No	
Course-specific, integrated English language courses	No	

Online learning

Pace of course	Mixed (e.g. fixed exam dates and duration, study content can be studied at any time)
Phase(s) of attendance in Germany (applies to the entire programme)	Yes, compulsory
Types of online learning elements	 Access to databases with study material Chats (with lecturers and other students) Discussion forums and / or groups Flipped Classroom MOOC (Massive Open Online Course) Online sessions Online study material provided by institution Video learning (Pre-recorded videos, Vlogs, Video-Podcasts)

Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Approx. 400 EUR semester fee ("Semesterbeitrag") The semester fee includes the following: Contribution to the "Studentenwerk Hannover" (student services organisation) Contribution to the student government (Student Union, AStA) Semester ticket Contribution to administrative costs for the Federal State of Lower Saxony http://go.lu-h.de/study-costs
Costs of living	Compared with other European countries, the cost of living in Germany is quite reasonable. The prices for food, accommodation, clothing, cultural events, etc. are basically in line with the EU average. You will need around 850 EUR a month to cover your living expenses. The largest expense will be your monthly rent. In Hanover, the rent amounts to between 300 and 500 EUR per month. Cost of studying at Leibniz University Hannover: http://go.lu-h.de/study-costs General information on the cost of studying in Germany: https://www.study-in.de/en/plan-your-stay/money-and-costs/cost-of-living_28220.php
Funding opportunities within the university	Yes

Description of the abovementioned funding opportunities within the university Although tuition fees no longer exist in Lower Saxony, costs are indeed incurred at university, such as the semester fee, accommodation and living costs, and costs for learning materials. Here you will find possibilities to help you finance your studies:

www.uni-hannover.de/en/studium/finanzierung-foerderung

Deutschlandstipendium: go.lu-h.de/deutschlandstipendium

Niedersachsenstipendium: go.lu-h.de/niedersachsenstipendium

For Water Resources and Environmental Management: go.lu-h.de/WATENV-funding

Requirements / Registration

Academic admission requirements

Academic admission requirements include a Bachelor's degree or equivalent degree in Geodesy and Geoinformatics or similar studies. Students should be familiar with the concepts of linear algebra, statistics and adjustment theory. They should have a basic understanding of digital imaging/computer vision, satellite positioning, and the Earth's gravity field. Important: they need to have programming skills.

Prior to the final admission, the admission committee can invite applicants to a 20-minute online interview carried out by the lecturers of the degree programme. The interview helps determine if the applicant is capable of successfully completing the desired study programme and if additional courses have to be taken.

In the case of missing basic competences in one or more of the above-mentioned fields, admission may only be granted if additional courses covering these basics are successfully completed. Note that in the case that the student has to complete additional courses, the duration of achieving the desired degree will exceed the regular two-year study duration.

For more information regarding the application process, please refer to the course website: http://go.lu-h.de/gug-future-students.

Language requirements

Applicants must provide proof of either Germanor English language.

German: C1 English: C1

http://go.lu-h.de/language-certificates

Application deadline

Non-EU applicants:

31 May for the following winter semester

30 November for the following summer semester

EU applicants:

15 July for the following winter semester 15 January for the following summer semester

Submit application to

Online application

Services

Possibility of finding parttime employment

There are many job opportunities for students on campus (in the different departments, the central administration, etc.) and off campus. About two-thirds of our students work at part-time jobs while pursuing their studies.

Internal job postings:

https://www.uni-hannover.de/en/universitaet/stellenangebote-arbeit-an-der-uni/jobboerse

Student jobs outside of the university: jobbico Uni Hannover

Accommodation

Links on housing in Hanover (including a video about housing in Hanover for international students)



Geodesy and Geoinformatics at Leibniz Universität Hannover

In today's digital world, Geodesy and Geoinformatics is an interdisciplinary cutting-edge science and technology subject. See and hear what students and a professor of our international MSc programme say about the subject of Geodesy and Geoinformatics.

» more:

https://www.youtube.com/watch? v=GBXwL-BdUUU

Leibniz University Hannover

Leibniz University Hannover: Shaping the future with knowledge

As one of the nine leading institutes of technology in Germany, Leibniz University Hannover is aware of its responsibility in seeking sustainable, peaceful, and responsible solutions to the key issues of tomorrow. Our expertise for this stems from the broad spectrum of subjects, ranging from engineering and natural sciences to architecture and environmental planning, and from law and economics to social sciences and humanities.

The main building of the university is the Royal Welfenschloss (Palace of the Guelphs) at Welfengarten Park. In 1879, the Higher Vocational School, originally founded in 1831, moved into the palace. Later, it became the Königliche Technische Hochschule (Royal College of Technology). Only 64 pupils attended the vocational school at first, but now there are almost 30,000 students enrolled in the nine faculties of Leibniz University Hannover and some 3,100 researchers working in more than 180 institutes.

Our key research areas

Leibniz University Hannover is among the world's leading institutions in itskey research areas: biomedical research and engineering, quantum optics and gravitational physics, production engineering, and interdisciplinary studies of science and academia. These give us our innovative strength in developing precision measurement methods, optical technologies, novel materials, intelligent implants, and innovations in information technology or in the field of Industry 4.0.

The broad range of subjects at Leibniz University Hannover is entirely compatible with the overall university strategy of raising its profile, in particular in teaching and research, including the establishment and enhancement of research priority areas originating in the humanities and social sciences. Cooperation agreements with national and international partners strengthen our scientific expertise – our most important partner is Hannover Medical School.

By adopting the name of the polymath Gottfried Wilhelm Leibniz in 2006, the university committed itself to unity in diversity.





University location

Gottfried Wilhelm Leibniz Universität Hannover is very influential in shaping the image of the state capital of Lower Saxony. Not only structures like the "Welfenschloss", the university's main building, but especially people contribute to this: approximately 30,000 students are currently enrolled. They have chosen one of the largest universities in Germany that is known for its international excellence in teaching and research. With nine faculties and a comprehensive range of study programmes, Leibniz Universität Hannover virtually covers the entire academic spectrum.

Find us here on Google Maps.

Contact

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Editor

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GATE-Germany

Consortium for International Higher Education Marketing www.gate-germany.de

Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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