



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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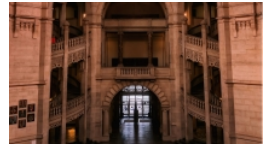
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Master's degree



Master of Science in Mathematics

Leibniz University Hannover • Hannover



Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	Students can choose to take courses either in English or in German.
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	<p>Non-EU applicants: 31 May for the following winter semester 30 November for the following summer semester</p> <p>EU applicants: 15 July for the following winter semester 15 January for the following summer semester</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The Master's programme has a prescribed length of four semesters (two years) and ends with the Master of Science degree. It builds on a first academic degree in mathematics (e.g., a Bachelor's degree) and it offers the opportunity to deepen the academic knowledge in one of the several major areas of mathematics, both pure and applied.</p> <p>The training in independent scientific work can be undertaken at one of the seven institutes that engage in cutting edge research in a wide variety of contemporary areas of the mathematical sciences.</p> <p>The main research topics at each institute include the following:</p>

- Institute of Algebra, Number Theory, and Discrete Mathematics: representation theory, arithmetic number theory, reflection groups and arrangements of hyperplanes
- Institute of Algebraic Geometry: algebraic surfaces, Calabi-Yau manifolds and their moduli, mirror symmetry, modular forms, singularity theory
- Institute of Analysis: partial differential equations on manifolds with geometric singularities, spectral geometry, geometric and deformation quantisation, noncommutative geometry and operator algebras, sub-Riemannian geometry, mathematical statistics
- Institute of Applied Mathematics: applied analysis, formation of mathematical models, optimisation, numerical analysis and scientific computing
- Institute of Differential Geometry: geometric flow equations, symplectic geometry, Kaehler and hyperkaehler geometry, gauge theory
- Institute of Actuarial and Financial Mathematics: stochastic analysis, actuarial and financial mathematics, probability theory

Course Details

Course organisation

The Master's programme is divided into a specialisation phase, which takes about three semesters, and a research phase, which takes one more semester. In the first phase, students acquire the basic knowledge and skills necessary for independent research work in mathematics as well as advanced knowledge in the major research fields of our faculty.

The study programme is rounded off by an elective course from another scientific field (e.g., physics, chemistry, philosophy, computer science, economic sciences, etc.).

The central element of the research phase is the Master's thesis. It is based on an independent research project on a current issue of mathematics.

The study programme is divided into modules. To earn the Master's degree, students must complete all required modules. Each module covers a thematic subject area. To each module, credit points are assigned, according to the expected workload. To earn credits for a module, students must complete various forms of coursework (homework, seminars) and pass an examination. Coursework may be repeated several times and does not have an impact on the final grade.

The official examination regulations list the required modules, the coursework, the forms of examinations, and the possible elective courses.

Course-specific, integrated German language courses

No

Course-specific, integrated English language courses

No

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

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 above-mentioned 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

Bachelor's degree (or equivalent) in Mathematics

Language requirements

Applicants must provide proof of their English or German skills.

English language requirement: TOEFL iBT (87), IELTS (6.0), Cambridge Certificate, FCE Grade A, or equivalent

German language requirement: TestDaF (4 x TDN 4), DSH-2, or equivalent

Students who do not fulfil the German language requirements can take basic German language courses as part of their coursework.

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

<https://www.uni-hannover.de/en/studium/vor-dem-studium/bewerbung-und-zulassung/studienplatzbewerbung/master-application-for-prospective-students-from-outside-the-eu/>

Services

Possibility of finding part-time 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)

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Specialist counselling

Leibniz University Hannover



Main building of Leibniz Universität Hannover

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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 its **key 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

Leibniz University Hannover

Fakultät für Mathematik und Physik

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30167 Hannover

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🌐 Course website: <https://www.uni-hannover.de/en/studium/studienangebot/info/studiengang/detail/mathematics-1/>
Studyguide

Tel. +49

✉ [Email](#)

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International Programmes in Germany - Database

www.daad.de/international-programmes
www.daad.de/sommerkurse

Editor

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German Academic Exchange Service
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www.daad.de

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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