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# Master's degree



## Data Analytics (MSc)

University of Hildesheim • Hildesheim

### Overview

Degree	Master of Science in Data Analytics
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	English only
Full-time / part-time	<ul style="list-style-type: none"><li>full-time</li></ul>
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	Non-EU applicants: 30 June for the following winter semester EU applicants: 31 August for the following winter semester  Non-EU applicants: 15 December for the following summer semester EU applicants: 15 February 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	The international Master's programme in Data Analytics combines both a deep and thorough introduction to cutting-edge research in machine learning, big data, and analytical technology with complementary training in selected application domains. Based on modern state-of-the-art machine learning methods, the Data Analytics programme will provide students with the knowledge and skills required for modelling and analysing complex systems in application domains from business, such as marketing and logistics, as well as from science, such as computer science and environmental science. The programme is designed and taught in close collaboration with experienced faculty and experts in machine learning and selected application domains.

### Course Details

## Course organisation

The two-year Master's programme in Data Analytics comprises four semesters with a total of 120 CPs (credit points). The study programme is structured into a methodological core (65%), an application area (10%), and a Master's thesis (25%).

Programme structure for the winter intake:

First semester

Compulsory modules:

- Machine Learning Lecture (6 CPs)
- Modern Optimisation Techniques Lecture (6 CPs)
- Programming Machine Learning Lab Course (6 CPs)
- Data Analytics I Seminar (4 CPs)

and one application module (6 CPs)

Second semester

Compulsory modules:

- Big Data Analytics Lecture (6 CPs)
- Advanced Machine Learning Lecture (6 CPs)
- Data and Privacy Protection Lecture (3 CPs)
- Distributed Data Analytics Lab Course (6 CPs)
- Data Analytics II Seminar (4 CPs)
- Project (part I) (6 CPs)

Third semester

Compulsory modules:

- Planning and Optimal Control Lecture (6 CPs)
- Project (part II) (9 CPs)
- Data Analytics III Seminar (4 CPs)

one methodological specialisation lecture (6 CPs)

and one application module (6 CPs)

Fourth semester

The Master's thesis is written during the last semester. (30 CPs)

Programme structure for the summer intake:

First semester

- Big Data Analytics Lecture (6 CPs)
- Data and Privacy Protection Lecture (3 CPs)
- Distributed Data Analytics Lab Course (6 CPs)
- Data Analytics I Seminar (4 CPs)
- Methodological Specialisation Lecture (6 CPs)
- Application Module I (6 CPs)

Second semester

- Machine Learning Lecture (6 CPs)
- Modern Optimisation Techniques Lecture (6 CPs)
- Programming Machine Learning Lab Course (6 CPs)
- Data Analytics II Seminar (4 CPs)
- Planning and Optimal Control Lecture (6 CPs)

Third semester

- Advanced Machine Learning Lecture (6 CPs)
- Data and Privacy Protection Lecture (3 CPs)
- Data Analytics III Seminar (4 CPs)
- Project (part I) (9 CPs)
- Application Module II (6 CPs)
- Master's thesis (part I) (6 CPs)

#### Fourth semester

- Project (part II) (6 CPs)
- Master's thesis (part II) (24 CPs)

A list of available modules for methodological specialisation and applications can be found [here](#).

Course-specific, integrated German language courses

Yes

Course-specific, integrated English language courses

No

## Costs / Funding

Tuition fees per semester in EUR

None

Semester contribution

You will pay a contribution of approx. 400 EUR per semester. This is a contribution to student services, university administration, and the student council. You can use the local public transport in Hildesheim and Lower Saxony free of charge. You will also benefit from discounts on meals at the university cafeteria and much more.

Costs of living

You will need around 850 EUR a month to cover your living expenses:

- Rent approx. 350–500 EUR
- Health insurance approx. 130 EUR
- Books and stationery approx. 50 EUR
- Meals approx. 200 EUR
- Other expenses approx. 100 EUR

Funding opportunities within the university

Yes

Description of the above-mentioned funding opportunities within the university

The University of Hildesheim offers scholarships (such as the College of Minerva and Lore-Auerbach scholarships) supporting especially capable and socially committed students. You can apply once a year in June. Additionally, the International Office offers scholarships that support international students with graduation grants, for example:

- [University of Hildesheim scholarships](#)
- [International Office scholarships](#)

## Requirements / Registration

Academic admission requirements

The Master's programme in Data Analytics is highly relevant for students aiming to pursue careers in research in an interdisciplinary field, data analytics, or a related industry. Students with a Bachelor's degree in Computer Science, Information Technology, Mathematics, or related fields are eligible to apply. Generally, students with a strong analytical, mathematical, and statistical base and good programming skills are more suited for this programme.

Eligible admissions are prioritised according to the following criteria:

- overall mark of your Bachelor's (53%)
- amount and marks of Bachelor's courses related to Data Analytics (incl. mathematics and programming, 35%)
- prior research activities in data analytics (6%)
- prior practical activities in data analytics (6%)

<b>Language requirements</b>	English language proficiency is required to undertake the Master's programme in Data Analytics. Sufficient knowledge of English can be demonstrated by a certificate (TOEFL computer-based test score of 61 or above, IELTS band of 6 or above, or an equivalent certificate) or a German "Abitur".
<b>Application deadline</b>	<p>Non-EU applicants: 30 June for the following winter semester EU applicants: 31 August for the following winter semester</p> <p>Non-EU applicants: 15 December for the following summer semester EU applicants: 15 February for the following summer semester</p>
<b>Submit application to</b>	<a href="https://www.ismll.uni-hildesheim.de/da/index_en.html">https://www.ismll.uni-hildesheim.de/da/index_en.html</a> <a href="https://www.ismll.uni-hildesheim.de/da/faq_en.html">https://www.ismll.uni-hildesheim.de/da/faq_en.html</a> <a href="https://www.ismll.uni-hildesheim.de/da/apply/">https://www.ismll.uni-hildesheim.de/da/apply/</a>

## Services


<b>Possibility of finding part-time employment</b>	<p>There are many job opportunities for students on campus (in the different departments, the central administration, etc.) and off campus. You can find part-time jobs here:</p> <ul style="list-style-type: none"> <li>• <a href="#">career service</a></li> <li>• <a href="#">student and research assistant positions</a></li> </ul> <p>International students are only permitted to work in Germany with a work permit. The student visa allows a maximum of 120 full days (or 240 half days) of work per year. If you earn more than 450 EUR a month, you will be subject to higher health insurance premiums.</p> <p>Make sure your study workload and working hours remain balanced.</p>
<b>Accommodation</b>	Accommodation is available through the Student Services Office or on the private market. Many students live in shared flats. Offers of room vacancies can be found on the notice boards in the university or online on "WG-Börsen" (shared flat marketplaces). The student services for Eastern Lower Saxony (Studentenwerk OstNiedersachsen) also has a room marketplace online.
<b>Career advisory service</b>	The <a href="#">career service</a> is aimed at students and recent graduates of all degree programmes at the University of Hildesheim and in all phases of the transition from study to work. Contact us — we will be happy to support you! During career week, you can take part in workshops specially designed for international students, for example, application workshops or career talks.
<b>Support for international students and doctoral candidates</b>	<ul style="list-style-type: none"> <li>• Welcome event</li> <li>• Buddy programme</li> </ul>

# Contact


**University of Hildesheim**  
Institute of Computer Science


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31141 Hildesheim

 Course website: [https://www.ismll.uni-hildesheim.de/da/index\\_en.html](https://www.ismll.uni-hildesheim.de/da/index_en.html)

 <https://www.facebook.com/iohildesheim>

 <https://de.linkedin.com/school/stiftung-universitaet-hildesheim/>

 <https://www.instagram.com/unihildesheim/>

 [https://www.youtube.com/channel/UCGQ1\\_JA\\_ZJ-RVfkaxOp0KTw](https://www.youtube.com/channel/UCGQ1_JA_ZJ-RVfkaxOp0KTw)

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# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

## Editor

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## GATE-Germany

Consortium for International Higher Education Marketing  
[www.gate-germany.de](http://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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