



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



## Table of Contents

<b>Master's degree .....</b>	<b>2</b>
<b>Mathematics (MSc) • University of Bremen • Bremen .....</b>	<b>2</b>

# Master's degree



**MATHEMATICS  
MASTER (MSc)**

## Mathematics (MSc)

University of Bremen • Bremen



## Overview

Degree	Master of Science (MSc)
Teaching language	<ul style="list-style-type: none"><li>English</li></ul>
Languages	The programme is offered in English. You may also attend any suitable courses or seminars that are offered in German and you can choose to write your Master's thesis in English or in another language upon request.
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	<ul style="list-style-type: none"><li>Application period for the following winter semester: 1 March to 30 April</li><li>Application period for the following summer semester: 1 August to 15 October</li></ul> <p>International applicants are encouraged to submit their application documents as soon as possible.</p>
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p><b>Why should you study Mathematics (MSc) in Bremen?</b></p> <p>Are you a Bachelor of Mathematics graduate looking to expand your mathematical horizons and job prospects? Does the idea of increasing your analytical and methodological proficiency excite you? Are you enticed by the thought of applying such skills to a variety of real-life problems? If so, the Mathematics Master's programme at the University of Bremen is the perfect choice for you! Here, you will have the opportunity to study at a young and innovative university while exploring the vibrant, cultural, and affordable city of Bremen. It is the perfect place for you to continue your</p>

mathematical journey!

In our department, we are passionate about mathematics and computer science. Our department is characterised by its great research strength and a strong commitment to university teaching. The high value we place on good teaching is also confirmed by great performance in national rankings. The teaching profile of the University of Bremen is consistently geared towards research-based learning. This is also a key part of our Mathematics Master's programme; it allows for a unique learning experience and offers high flexibility to accommodate your personal scientific interests. In addition, you can benefit from several Collaborative Research Centres and Research Training Groups that are part of our department, as they open up early options for postgraduate studies.

### Goals of the Master's Programme and Career Opportunities

As a graduate of our international Master's programme in Mathematics at the University of Bremen, you will acquire a wide range of cutting-edge mathematical problem-solving strategies that will prepare you for a professional life both inside and outside academia.

Mathematicians are in demand worldwide; not only in science, but also in almost all areas of the job market – especially in high-tech fields, in finance and insurance, in software development, in management consulting, and in medicine as well as in digital communication. Of course, you will also be perfectly prepared for consecutive doctoral studies in mathematics.

### Specialisation areas

You can choose from a wide range of advanced research courses in the following areas, with each direction represented by specialised research groups from our department:

- Algebra
- Analysis
- Numerical Analysis
- Statistics/Stochastics

You can select between two variants of the curriculum:

- a more **theoretical direction** focusing on mathematics without a secondary subject, or
- an **application-oriented track**, in which you choose a secondary subject such as
  - Biology (German)
  - Chemistry (English/German)
  - Computer Science (English/German)
  - Economics (English/German)
  - Electrical Engineering (English/German)
  - Geosciences (English)
  - Mechanical Engineering (German)
  - Philosophy (German)
  - Physics (English/German)

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## Course Details

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### Course organisation

Our special focus in research and teaching is on algebra and topology, ergodic theory and dynamical systems, hyperbolic geometry, mathematical stochastics and statistics (especially multiple testing), and a broad spectrum of applied mathematics, such as inverse problems, AI methods, optimisation and optimal control, and discrete optimisation.

You can choose a specialisation ("Specialisation A/B/C" in the sample study plans) from the four areas of

- Algebra
- Analysis
- Numerical Analysis
- Statistics/Stochastics

Courses in the other three areas contribute to broadening your knowledge ("Diversification A/B/C" in the sample study plans).

As mentioned before, you can choose to study mathematics with or without an application subject such as biology, chemistry, computer science, economics, electrical engineering, geosciences, mechanical engineering, philosophy, or physics.

In this way, you will have the opportunity to tailor your study programme to your individual interests and strengths. For the first three semesters, you will create an individual study plan from the following module types:

- Lectures (typically with weekly exercise sessions)
- Graduate seminars
- Reading courses
- General studies

The fourth semester is reserved for writing and presenting the Master's thesis. See the illustration below for sample curricula. The module of "Advanced Communications" consists of two graduate seminars.

Further information can be found [here](#).

<b>A Diploma supplement will be issued</b>	Yes
<b>International elements</b>	Participants may study abroad at one of the partner universities of the department for one or two semesters, e.g. via the <a href="#">Erasmus exchange programme</a> , <a href="#">PROMOS</a> or through <a href="#">YUFE</a> – "Young Universities for the Future of Europe".
<b>Description of other international elements</b>	Participants may study abroad at one of the partner universities of the department for one or two semesters, e.g. via the <a href="#">Erasmus exchange programme</a> , <a href="#">PROMOS</a> or through <a href="#">YUFE</a> – "Young Universities for the Future of Europe".
<b>Course-specific, integrated German language courses</b>	No
<b>Course-specific, integrated English language courses</b>	No

## Costs / Funding

<b>Tuition fees per semester in EUR</b>	None
<b>Semester contribution</b>	The semester contribution is an administrative fee of approx. 350 EUR, which is charged once per semester. It includes free use of public transportation ("Semesterticket") in and around Bremen and is valid for six months. With the semester ticket, you can travel free of charge on regional trains to neighbouring cities such as Hamburg, Lübeck, Hannover, Göttingen, Kassel, Hengelo (NL), Münster, Magdeburg, and even the North Sea coast for leisure activities.
<b>Costs of living</b>	The cost of living in Bremen amounts to approx. 900 EUR per month. You can find more information, e.g. <a href="#">here</a> and additional information regarding the semester contribution can be found <a href="#">here</a> .

It is possible to rent a room for 300 EUR per month. The exact amount depends on the quality and size of the room and whether you share a flat with others. The university offers a [student canteen](#) where a wide range of quality food is available at very moderate prices.

**Funding opportunities within the university**

Yes

**Description of the above-mentioned funding opportunities within the university**

Funding opportunities offered by the University of Bremen can be found [here](#). Once you are a student at the University of Bremen, you can apply for a [Deutschlandstipendium](#).

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## Requirements / Registration

**Academic admission requirements**

The admission requirements are set out in the [Admission Regulations for the Master's programme in "Mathematics"](#). The main requirements are as follows:

- a Bachelor's degree in mathematics or a comparable undergraduate degree with at least 180 ECTS points
- at least 90 ECTS points in mathematics
- a cover letter in English which explains both your motivation for applying as well as your intended area of specialisation (algebra, analysis, numerical analysis, or statistics/stochastics)

**Language requirements**

Proof of [English language proficiency](#) at a B2 level (CEFR) or higher is required. Having acquired your university entrance qualification or a previous university degree in English also serves as proof of English language proficiency.

In addition, proof of German language proficiency at an A1 level (CEFR) or higher must be provided. [German exams can be taken at the Goethe-Institut](#)

**Application deadline**

- Application period for the following winter semester: 1 March to 30 April
- Application period for the following summer semester: 1 August to 15 October

International applicants are encouraged to submit their application documents as soon as possible.

**Submit application to**

Apply for the study programme via the [application portal](#) of the university.

Further useful information can be found [here](#).

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## Services

**Possibility of finding part-time employment**

Numerous student jobs are offered in the city and the surrounding area. There are limited [job opportunities](#) for students as graduate research assistants or as teaching assistants at the department.

**Accommodation**

Accommodation is available in [student residences](#); we recommend applying early. You can also look for private accommodation.

A wide range of housing options close to campus can be found [here](#).

#### Career advisory service

The [Career Center](#) support students who wish to prepare themselves for their career as well as alumni and research assistants on their way to a professional career.

[BYRD](#) is the support centre for early-career researchers at the University of Bremen.

General information is also provided [here](#).

#### Support for international students and doctoral candidates

- Welcome event

#### General services and support for international students and doctoral candidates

The [Central Student Advisory Service](#) provides information and advice to everyone who has questions about studying at the University of Bremen.



## You Know Why

Do you not know why you should study at the University of Bremen yet? Find out now!

» more:  
<https://www.youtube.com/watch?v=4cCilWk5RkY>

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# University of Bremen

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The university campus

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The [University of Bremen](#) is a medium-sized German university with around 20,000 students. There are 2,300 academic staff members (43% of which are female), among them 270 professors (32% of which are female), who teach and carry out research in a wide range of disciplines. We have a long established tradition in interdisciplinary cooperation and excellent research in natural sciences, engineering, the social sciences and the humanities as well as in teacher training. From 2012–2019, the University of Bremen with its "Ambitious and Agile" future concept was one of eleven German universities that held the title of "University of Excellence".

The university takes its social responsibility seriously and fosters its activities with many groups and institutions in Bremen, including twelve non-university research institutes within the [U Bremen Research Alliance](#). We are not afraid to be the first to tread new territory: Founded as a reform university, we aim to breathe life into change. Our vision: to further anchor the University of Bremen as a leading European research university and an inspiring place of education. To achieve this, we rely on our strengths, on the potential of all university members, and on the trusting cooperation with our partners.

#### [Further information](#)



## University location

The Hanseatic city on the banks of the Weser River emanates a special charm. Bremen enjoys a reputation for being cosmopolitan and tolerant. It has a lot to offer: ports and ships, universities, colleges, high technology, and picturesque, narrow streets built in centuries past as well as a comprehensive programme of sports and cultural events.

# Contact

## University of Bremen

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🌐 Course website: <http://unihb.eu/mathapp>

📘 <https://www.facebook.com/fb3unibremen/>

🐦 <https://twitter.com/3Fachbereich>

📷 <https://www.instagram.com/mathe.informatik.unibremen/>

📺 <https://www.youtube.com/@unibremen>

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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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