



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Mathematical and Theoretical Physics

Bielefeld University • Bielefeld

Overview

Degree	Master of Science (MSc)
Teaching language	<ul style="list-style-type: none">• German• English
Languages	<p>Courses are held in English and German.</p> <p>Participants can choose to write their Master's theses in either language.</p>
Full-time / part-time	<ul style="list-style-type: none">• full-time
Mode of study	Fully on-site with voluntary online elements
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	<p>Applicants with a foreign degree:</p> <ul style="list-style-type: none">• 15 July for the following winter semester• 15 January for the following summer semester <p>Applicants with a German degree:</p> <ul style="list-style-type: none">• 1 September for the following winter semester• 1 March 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	<p>Bielefeld University is one of the few places in Germany offering accredited Master of Science studies in mathematical and theoretical physics. With a long tradition in interdisciplinary research, the faculties of physics and mathematics cooperate closely in this programme, each responsible for about 50% of the teaching. It is possible to combine several of the existing key research areas, including condensed matter theory, cosmology, dynamical systems, elementary particle physics, mathematical physics, numerics, probability theory, stochastic and harmonic analysis. Both</p>

faculties are part of the Bielefeld Graduate School in Theoretical Sciences. In particular, this includes the International Research Training Group (IRTG) 2235 "Searching for the regular in the irregular: Analysis of singular and random systems", which is co-hosted by Bielefeld University and Seoul National University.

Course Details

Course organisation	The two-year Master's programme in mathematical and theoretical physics has an English-speaking international track that enables non-German-speaking students to pursue these studies. International and German students jointly follow all courses offered in English. During the first year, parallel courses in theoretical physics, mathematics and mathematical physics are offered. In the second year, the students specialise in one of these three fields and write their Master's theses. Our goal is to have each thesis supervised jointly by two faculty members, one from each faculty.
International elements	<ul style="list-style-type: none">• Projects with partners in Germany and abroad• International guest lecturers
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	<p>Since Bielefeld University does not charge tuition fees, every student only has to pay a social fee. The social fee includes the contribution to the social ticket for free public transport in the city and area of Bielefeld and on regional trains and buses in North-Rhine Westphalia for the whole semester.</p> <p>The current semester contribution is approximately 300 EUR.</p>
Costs of living	<p>Costs for studying in Germany are relatively high due to the living expenses.</p> <ul style="list-style-type: none">• Rent in a room in student halls of residence or a private student hall, in a room or flat comes to approx. 280 EUR per month.• The expected costs for student health insurance and other medical fees are about 80 EUR per month.• Depending on your lifestyle, you might spend about 150 EUR on food each month.• Altogether, monthly costs for food, clothes, leisure activities, social fees, travel expenses, telephone bills, and the other mentioned expenses add up to approx. 850 EUR. <p>There are several ways of cutting expenses in Bielefeld. For example, it is possible to rent a room in a student residence for about 230 EUR, and a meal at the student canteen (Mensa) costs only about 2.60 EUR.</p>
Funding opportunities	No

Requirements / Registration

Academic admission requirements

This interdisciplinary Master's programme is open to students with a Bachelor's degree in physics or in mathematics, with a strong record in the complementary field. In mathematics we require at least 32 credits (ECTS) in analysis, linear algebra, and measure and integration theory. At least 48 credits in total are required in physics, consisting of theoretical physics (mechanics, electrodynamics, special relativity and quantum mechanics), experimental physics (mechanics, electrodynamics, optics, thermodynamics and atomic physics) and physics laboratories. Further advanced studies of at least 20 credit points in theoretical physics, mathematics or both are also required. Under certain criteria conditional admission may be granted for other applicants, with compensatory studies required.

Language requirements

For admission, a qualifying BSc degree awarded at an English-speaking or German-speaking university is required. Otherwise, a language proficiency test is required in English, e.g. TOEFL (iBT) with at least 87 points (level B2), or in German, e.g. TestDaF level (TDN) 3 or DSH at least level 1 (DSH 1).

Application deadline

Applicants with a foreign degree:

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

Applicants with a German degree:

- 1 September for the following winter semester
- 1 March for the following summer semester

Submit application to

Apply via the [online portal](#).

For further information about the application to the Master's programme, please use the following link: www.uni-bielefeld.de/bewerbung.

Services

Possibility of finding part-time employment

Basically, with your residence permit (stamp in your passport), you will receive a work permit for 120 work days per year. This allows you to work 120 full days (eight hours per day) or 240 half days (up to four hours per day). This condition must be noted expressly in the passport by the authorities.

Accommodation

Please try to secure accommodation in Bielefeld as early as possible. In Bielefeld, a broad range of accommodation options can be found at affordable prices. Students residences are run by the public "Studierendenwerk" or private organisations, and shared flats are very common.

Offers of accommodation can be found online by following the links below:

- [Studierendenwerk Bielefeld](#) (dormitories)
- WG-gesucht.de (private shared accommodation)

The International Office supports students who are searching for accommodation.

Career advisory service

Career planning is a step-by-step development and clarification process that requires individual strategies. Based on a strengths- and resource-oriented approach, we support you in developing your own career prospects.

Depending on your needs, our Career Service at Bielefeld University will accompany you throughout the entire process or in individual steps.

<https://www.uni-bielefeld.de/themen/career-service>

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Accompanying programme
- Cultural and linguistic preparation
- Visa matters
- Help with finding accommodation
- Support with registration procedures
- Specialist counselling

General services and support for international students and doctoral candidates

At PunktUm, our German Learning Centre, we offer a comprehensive range of academic support programmes that are designed to meet the needs of international members of the Bielefeld University. These include the Academic Mentoring Programme for Master's students, the Peer Mentoring Programme for Bachelor's students, and semester-long workshops designed to help all students and researchers with academic writing. We also offer individual consultations on academic writing in German as a Foreign Language (DaF) or German as a Second Language (DaZ).

The International Office provides an orientation programme for all international members of Bielefeld University, including degree seekers (BA and MA), double degree students, Erasmus/cooperation students, doctoral students, scholars, interns, and refugees/preparing applicants. Example of activities include Café International, campus tour, introductions to digital services and administrative procedures.

Contact

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🌐 Course website: <https://ekvv.uni-bielefeld.de/sinfo/publ/master-as/mtp?m&lang=en>

📘 <https://de-de.facebook.com/BielefeldUniversity/>

🐦 <https://twitter.com/unibielefeld?lang=en>

📷 <https://www.instagram.com/bielefelduniversity>

📺 <https://www.youtube.com/bielefelduniversity>

Last update 01.08.2024 14:19:42

International Programmes in Germany - Database

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

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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".

The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.



Federal Ministry
of Education
and Research