



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Biochemistry and Molecular Biology

University of Potsdam • Potsdam

Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	The language of instruction in the Master's programme in Biochemistry and Molecular Biology is English. Exceptions are possible. All mandatory classes can be completed without German skills.
Mode of study	Less than 50% online
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	1 June for the following winter semester 1 December 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

Our international Master's programme in Biochemistry and Molecular Biology focuses on a broad spectrum of research topics ranging from molecules to cells and animal or plant life. The different research teams in our programme have core expertise in the fields of biomedicine, molecular plant sciences, evolutionary systems biology, and macromolecular systems. Master's students will be involved in research using the latest technologies in genomics, genetics, systematic bio- and protein analysis, and high-end microscopy. The Faculty of Science is embedded in collaborative interdisciplinary research networks, including the Max Planck and Fraunhofer Institutes.

Programme Content

This Master's programme combines exciting basic research in the core areas of Biomedicine, Molecular Plant Sciences, Evolutionary Systems Biology, and Macromolecular Systems. Within the programme, students can select from a broad choice of both practical and theoretical modules for each of the core areas. This allows students to follow their interests and pursue research projects within a personalised curriculum.

Students will study and work on cutting-edge research topics in biochemistry and molecular biology. This training will provide them with comprehensive knowledge in the fields of modern sequencing technologies, genome manipulation, high-end light and electron microscopy, and

bioanalytical methods as well as qualitative and systematic protein analysis.

In the field of biochemistry, students will focus on the dynamics and processes of protein synthesis and function as well as their interactions at intra- and extracellular levels. These processes are relevant for practical applications such as the diagnosis and therapy of cardiovascular and neurodegenerative pathologies, or tumorigenesis.

The field of molecular biology addresses molecular processes at the level of molecules, cells, and organisms. This research provides important new insights into questions related to genome research and cellular and systems biology as well as animal and plant development and physiology.

Course Objective and Future Career Options

In this Master's programme, students will acquire specialised knowledge in the core research areas and will be able to apply state-of-the-art methods to current research questions in the field. They will also gain a thorough understanding of the essential principles of biochemistry and molecular biology. With this, students will be able to formulate scientific problems on their own, select appropriate methods and techniques to solve them to successfully accomplish a project, and summarise results in a manuscript.

The acquired skills will qualify students for an academic career and a position as a doctoral student as well as for work within the area of research and development at biotech or biomedical companies or other scientific institutions. Further possible career paths are in science journalism, administration, or management.

The University of Potsdam supports start-ups, innovation, and the transfer of knowledge and technology (Potsdam Transfer) as well as the careers of graduates (Career Service).

Course Details

Course organisation

The consecutive Master's programme in Biochemistry and Molecular Biology is offered at the University of Potsdam as a single-discipline programme with a standard completion time (full-time study) of four semesters and 120 credit points.

The course programme includes two mandatory core modules on applied bioinformatics and state-of-the-art research in biochemistry and molecular biology. In addition, the students must complete three orientation modules that are each worth 11 ECTS credits. Every orientation module consists of a lecture, a literature seminar, and a six-week research project. The course programme contains five to six further elective modules, typically consisting of a lecture, a literature seminar, and a two-week research project, for a total of 40 ECTS credits. An advanced research practical training to prepare the six-month Master's thesis completes the course. The orientation and elective modules can be chosen from a wide range of topics offered by the participating research groups of the Institute of Biochemistry and Biology.

<https://www.uni-potsdam.de/en/bam/study-plan>

Students have the opportunity to specialise in the following subjects: structural and chemical biology, enzymology, immunology, microbiology, synthetic biology, genetics, animal and plant physiology, cellular and developmental biology, nanobiotechnology, biophysics, and bioinformatics.

<https://www.uni-potsdam.de/en/bam/module-manual>

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A Diploma supplement will be issued

Yes

Course-specific, integrated

No

German language courses

Course-specific, integrated English language courses	No
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Online learning

Pace of course	Instructor-led (Specific due dates for lectures/assignments/exams)
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Phase(s) of attendance in Germany (applies to the entire programme)	Yes, compulsory
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Types of online learning elements	<ul style="list-style-type: none">• Online sessions
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Costs / Funding

Tuition fees per semester in EUR	None
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Semester contribution	No tuition is charged for studying at the University of Potsdam (with the exception of a few continuing education courses). There is only an administrative fee of currently 316 EUR. This semester contribution includes a semester ticket entitling you to free use of public transport all over Brandenburg and Berlin.
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Costs of living	Living in Germany is rather cheap compared to other countries in Northern and Western Europe. Monthly living expenditures of students at the University of Potsdam vary between 870 and 1,200 EUR, largely depending on accommodation. A more detailed list of the average monthly expenditures of our students can be found here .
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Funding opportunities within the university	No
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Requirements / Registration

Academic admission requirements	Applicants are required to hold an undergraduate academic degree in a discipline/programme related to the Master's programme, such as biology, biochemistry, biosciences, biotechnology, biomedicine, or bioinformatics, with a total of 180 ECTS credit points. Each applicant needs to document knowledge of molecular biology and biochemistry totalling at least 60 ECTS credit points that were obtained during his or her Bachelor's degree.
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In addition, the applicant needs to document the acquisition of basic scientific working methods for writing scientific papers and texts (e.g., protocols, Bachelor's thesis) or doing practical work totalling at least 18 ECTS credit points.

Language requirements	Applicants must provide proof of their German (level A2) and English (level B2) skills; the levels are according to the CEFR.
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	German: Goethe-Zertifikat A2 or equivalent English: UNICert (at least level II), TOEFL (75 Internet-based test), IELTS (at least 5.0 in each area), English-language Bachelor's degree, or equivalent
Application deadline	1 June for the following winter semester 1 December for the following summer semester
Submit application to	The application is to be completed online via the uni-assist application portal.

Services

Possibility of finding part-time employment	Job opportunities for students alongside their studies are numerous. Depending on personal and professional skills, students can find jobs in the service sector (e.g. in restaurants, supermarkets, cinemas, museums, theatres, etc.) or work as student assistants at the University of Potsdam or at one of the many non-university research institutions located in the area. The German capital, Berlin, is located just around the corner, and students can also find jobs there. Please see this website for further information.
Accommodation	<p>There are several student dormitories in Potsdam. These are administered exclusively by Potsdam's Association for Student Affairs ("Studentenwerk Potsdam"). You can apply for a room in one of these dormitories if you are under the age of 30. If you are a Master's student, you can only apply if the degree at the University of Potsdam is your first Master's programme. Additionally, there are also a few private dormitories in Potsdam, to which these conditions do not apply. However, many students prefer to find an apartment in Potsdam or Berlin, which they often share with fellow students. The housing market is tight, so please start looking for an accommodation as early as possible.</p> <p>For information on how to register for a dorm room or find accommodation elsewhere, please click this link.</p>
Career advisory service	The Career Service of the University of Potsdam supports students and graduates who want to actively shape their careers. The aim is to ensure comprehensive career orientation and to provide opportunities for the development of professional skills. The Career Service offers workshops, seminars, and individual counselling. There are information pages on a wide range of occupational fields as well as a database of internships and jobs. Many of the services are also available in English.
Support for international students and doctoral candidates	<ul style="list-style-type: none"> • Specialist counselling • Welcome event • Buddy programme • Tutors • Visa matters

Contact

University of Potsdam

Faculty of Science

Karl-Liebknecht-Straße 24-25
14476 Potsdam

✉ tutoribb@uni-potsdam.de

🌐 Course website: <https://www.uni-potsdam.de/en/studium/what-to-study/master/masters-courses-from-a-to-z/biochemistry-and-molecular-biology-master>

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

🐦 <https://twitter.com/unipotsdam>

🌐 <https://www.linkedin.com/school/university-of-potsdam/>

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

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International Programmes in Germany - Database

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Editor

DAAD - Deutscher Akademischer Austauschdienst e.V.
German Academic Exchange Service
Section K23 – Information on Studying in Germany
Kennedyallee 50
D-53175 Bonn
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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