

INTERNATIONAL PROGRAMMES

Table of Contents

Master's degree	2
Environmental Chemistry (MSc) • University of Bayreuth • Bayreuth	5

Master's degree



Environmental Chemistry (MSc)

University of Bayreuth • Bayreuth











Overview

Degree	Master of Science
Teaching language	• English
Languages	All courses are in English, and the Master's thesis will be written in English.
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	15 June
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	Environmental Chemistry addresses today's global challenges caused by increasing industrialisation and over-exploitation of natural resources. Contamination is seldom restricted to one compartment (air, soil, or water), but affects whole ecosystems and often has a considerable political dimension. The key to future sustainable resource management, current impact prediction, and prudent clean-up of past contaminated sites is a solid understanding of environmental chemistry.
	The internationally-oriented Master's programme in Environmental Chemistry is interdisciplinary in nature. It is structured in individual modules that focus on the environmental compartments air (A), soil (S), and water (W) as well as on chemical modelling, analytics, and toxicology (chemistry and analytics C), experimental biogeochemistry (EB) and isotope geochemistry (ISO). Additionally, integrative and methodological modules (M) and electives (E) are offered.
	In the two-year Master's programme, you learn to address global environmental chemical challenges with knowledge, skills, and experience from an application-oriented and strongly interdisciplinary perspective. Aside from the core understanding of processes in air, soil, and water, subjects include inorganic and organic chemistry, microbiology, toxicology, ecosystem analysis, and human-environment interactions. Exercises in small groups enable hands-on experience of the

front-end analytical techniques in the individual research groups and development of solution-oriented thinking and creativity. You are trained in critical reflection, abstraction, and logical argumentation as well as oral and written communication. Different perceptions of environmental challenges by students from different countries at different stages of development and with different cultural and socio-economic backgrounds are integrated to sharpen understanding of international contexts.

A detailed module handbook is provided for an overview of content and the qualification objectives of all modules, as well as the credits to be acquired as a measure of the workload and a description of the type of assessment components required for the award of credits.

Course Details

Course organisation

The MSc degree programme in Environmental Chemistry should be undertaken in four semesters (full-time) or eight semesters (part-time). It requires attendance and active participation and concludes with the MSc thesis. All courses are offered on an annual basis, and new students can only enter the programme in the winter semester. The students earn 30 ECTS per semester, 120 ECTS in total.

The programme is structured in individual modules that focus on the environmental compartments air (A), soil (S) and water (W), as well as on chemical modelling, analytics and toxicology (chemistry and analytics C), experimental biogeochemistry (EB) and isotope geochemistry (ISO). Additionally, integrative and methodological modules (M) and electives/internships (E) are offered. Each module is equivalent to 5 ECTS, whereas the MSc thesis is equivalent to 30 ECTS. The compulsory part of the degree programme in the first semester focuses on lectures, accompanied by practical courses to compensate for the potentially non-uniform level of education. In the second and third semester, the fraction of practical courses increases depending on the selection of subjects that are often taught in project-like modules and, in particular in the third semester, in seminars to stimulate and further intensify scientific communication and discussion. Graduates receive a Master of Science (MSc) degree.

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International elements

• Projects with partners in Germany and abroad

Integrated internships

Internships can be integrated into the E-modules.

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

In Germany, students at all higher education institutions pay a semester contribution. This payment (University of Bayreuth: 142.85 EUR per semester) has nothing to do with tuition fees; rather, it covers your contributions to student services and the student government. At the University of Bayreuth (which combines the campus in Bayreuth and our Faculty VII located in Kulmbach), it includes a "semester ticket" that allows you to use public transport in the region.

Costs of living

The cost of living in Germany, e.g. accommodation, food, clothing and recreational activities, is about average compared to other European countries. Living expenses are significantly lower than in countries like Denmark, Luxembourg or Switzerland, but they are rather high compared to countries like Poland, the Czech Republic or Italy. Compared to other large German cities, such as Munich, Berlin or Hamburg, Bayreuth's low cost of living and affordable housing make the city and the region particularly attractive to young people and families. The DAAD website will tell you what living expenses to expect in Germany: https://www.daad.de/deutschland/nachdeutschland/voraussetzungen/en/9198-financing/.

Funding opportunities within the university

Yes

Description of the abovementioned funding opportunities within the university Scholarships for international students: International students and doctoral researchers have the opportunity to apply to the International Office for a study grant. Limited funding from the State of Bavaria and the DAAD is available for this purpose. The application deadline for the winter semester is 31 August and for the summer semester 28 February. All grants can be awarded for up to two semesters.

Unfortunately, first-semester students cannot be funded, i.e. applications cannot be submitted until the second semester of study for funding starting in the third semester of study. Above all, academic achievements from the previous semester are decisive for the evaluation of the application.

Requirements / Registration

Academic admission requirements

A Bachelor's degree from a higher education institution in Germany or abroad in biology, chemistry, geoecology, geology, forestry, agricultural sciences, hydrology, ecological engineering, limnology, meteorology, physical geography, environmental physics, environmental economics, environmental law, or an equivalent degree that was completed with a total of at least 20 credit points in physics, biology, and chemistry along with at least 20 credit points in environmental science and a final grade of "good" (2.5) or better.

There will be an aptitude assessment process.

(For details, please see our website: http://www.bayceer.uni-bayreuth.de/environchem/en/reg/gru/html.php?id_obj=9515.)

Language requirements

Applicants who did not gain their higher education entrance qualification or initial degree in the English language can demonstrate their English language skills by way of a thesis or by way of a B2 level language certificate according to the Common European Framework.

Proof of German language at A1 level has to be shown by the end of the second semester.

Application deadline

15 June

Submit application to

Application is only possible through our online portal at: http://www.bayceer.uni-bayreuth.de/environchem/en/reg/5001/grade_check.php

(Please do not send any documents by mail or e-mail!)

Services

Possibility of finding parttime employment

There are many ways for international students to earn money while they study, but there are some restrictions. For more detailed information, please visit the DAAD website.

The University of Bayreuth's Career Services teamprovides a central interface between student and professional life. The team offers guidance and support to students of all subjects with regard to starting their careers.

For information regarding the **Corona virus**, please visit our website and also see https://www.daad.de/en/coronavirus/.

Accommodation

Accommodation for students

Bayreuth and Kulmbach have a number of student dormitories (both private dormitories and dormitories offered by the Association for Student Affairs) and a vast array of private rooms available. Under no circumstances should you assume that you will be assigned a room in the student dormitories! You will need to actively search for a room on your own – either in a private dormitory or on the private market.

More information regarding accommodation for students is available here:https://www.unibayreuth.de/en/studies/accomodation/index.html. Please also read the DAAD's information.

Accommodation for international guests

All other international guests are requested to register via the Welcome Services Database (WelSe).

Accommodation for short visits

For short visits, we recommend searching for accommodation on Airbnb. In addition, a limited number of apartments are available in the Alexander von Humboldt Guest House.

Support for international students and doctoral candidates

• Welcome event

Supervisor-student ratio

Approx. 1:4 for courses, 1:1 for thesis



Corporate video of the University of Bayreuth

It all begins with a dream – a search for knowledge and insights, important changes, every great idea. Welcome to the University of Bayreuth!

more: https://www.youtube.com/watch? v=vWIe6FHIR5k

University of Bayreuth



The University of Bayreuth is one of the most successful young universities in Germany.

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International, innovative, and interdisciplinary in research and teaching

Top-notch research, state-of-the-art teaching methods, international influences, diversity, and a springboard to a successful career – these are all things the University of Bayreuth stands for.

The University of Bayreuth is a dynamic campus university with currently about 13,000 students. Beyond the interdisciplinary research focus and excellence in teaching, the university has a clear vision of social responsibility and entrepreneurship. In the middle of Kulmbach, our new satellite campus unites the perspectives of natural science, economics, law, social sciences, and behavioural science in one place in a way that has not yet been seen in Germany.

We have a close network of strategically selected international research partners, and we have strategic partnerships with universities around the globe. A wide range of innovative BA, MA and PhD programmes as well as our international summer schools are conducted in English. There are presently around 1,770 international students from more than 100 countries on the Bayreuth and Kulmbach campuses. Focus areas in research include Nonlinear Dynamics, Polymer and Colloid Science, Molecular Biosciences, Ecology and Environmental

Sciences, New Materials, African Studies, High Pressure and High Temperature Research, Cultural Encounters and Transcultural Processes, Innovation and Consumer Protection, Food and Health Sciences, Energy Research and Energy Technology, Governance and Responsibility.

Our university has an outstanding staff-to-student ratio. Our high performance levels, multidisciplinary collaborations and scientific excellence result in high-ranking positions. In the 2021 THE ranking of "475 under 50", the University of Bayreuth once again achieved a top position among the best universities in Germany. We have proven expertise in campus and curriculum internationalisation, which is confirmed by the results of the extended internationalisation audit conducted by the German Rectors' Conference, a close and successful project cooperation with the German Academic Exchange Service (DAAD) and a number of Alexander von Humboldt Awards for our international management and service.

Welcome to our one-of-a-kindcampus in Bavaria!

It is both the heart of our university and a source of inspiration. It is where friendships are made, collaboration is initiated, and ideas are conceived, ensuring that our university remains a beacon of innovation. Scientific exchange profits tremendously from the wide variety of disciplines our communicative campus brings together.

Coronavirus

Be sure that there is a **comprehensive and high-quality range of courses** in all degree programmes that will enable students to successfully begin and continue their studies – on campus or online.





University location

Welcome to Bavaria!

Seventy-six thousand people from **145** nations chose the city of Bayreuth as their new home, and those numbers are steadily rising. Because of its 13,000 students, Bayreuth is the third-youngest city in Germany. Living here means not getting stuck in traffic jams every morning. The short distances in Bayreuth allow you to leave your car at home and to walk or ride your bike to work and to campus.

Career & Networking

The Welcome Service at the University of Bayreuth is here to assist you with any questions regarding living andworking in the region of Bayreuth. The team of our International Office provides guidance and support for all international students, scholars, and their families before, during and after their stay at the University of Bayreuth. The aim is to ensure a quick, trouble-free and thus successful start as well as an unforgettable stay on our friendly campus in Bayreuth and Kulmbach.

A good climate for your entrepreneurial spirit

The University of Bayreuth takes its role as a regional motor of innovation very seriously. The Office of Entrepreneurship & Innovationwas set up to help students gain the necessary qualifications in the area of entrepreneurial and innovative thinking and acting. In doing so, we nurture our students' willingness and ability to start their own companies. Our Adviser for Start-Ups provides start-ups and prospective start-ups with confidential guidance and support. Strong innovation and research institutions combined with high-performance medium-sized companies make for a steady rise in workforce and a guarantee for job security.

Your new home away from home

Bayreuth and Kulmbach offer a fast variety of childcare services as well as affordable **living space**. Step outside your front door and enjoy the **recreational activities**. Scenic northern Bavaria is great for sports activities: cycling, hiking, mountain-climbing, canoeing, rafting, and skiing are all excellent ways to enrich your leisure time. However, if you do happen to crave the feel of a bigger city now and then, Nuremberg is only a one-hour train ride away and Munich is only two-and-a-half hours away. You can reach Berlin in four hours by car or bus and Leipzig in half that time.

Have a great start. We look forward to meeting you!

Contact

University of Bayreuth

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- https://www.instagram.com/uni.bayreuth/

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Consortium for International Higher Education Marketing www.gate-germany.de

Disclaimer

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