



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Global Change Ecology (MSc)

University of Bayreuth • Bayreuth



Overview

Degree	Master of Science
In cooperation with	University of Augsburg
Teaching language	<ul style="list-style-type: none">English
Languages	The teaching language is English (100%). The participants write their Master's theses in English.
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	Application period for all students 1 March to 15 June
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

Description/content

The [Global Change Ecology \(MSc\) programme](#) established in 2006 as part of the [Elite Network of Bavaria](#), is devoted to understanding and analysing the most consequential environmental concerns of the 21st century, namely global change. Problems of an entirely new and interdisciplinary nature require the establishment of innovative approaches in research and education. A special focus of the programme is the linking of natural science perspectives on global change (e.g. land use change and climate change) with approaches in social sciences.

Course modules comprise lectures, seminars, and exercises as well as field courses on environmental change, ecological change, and societal change. Method courses such as modelling, statistics, use of remotely sensed data, life cycle assessment of products, geographic information systems, international environmental law, and impact assessment on land use and ecosystem services round out the study programme. The programme offers the unique opportunity to gain credit for internships and science schools (module groups I and S).

The University of Bayreuth provides an excellent profile and background in 'Ecology and Environmental Science' as determined by the expert commission "Science in Bavaria 2020". The academic departments provide special opportunities for the elite degree programme, along with ongoing research projects that examine questions of global change.

For further information, please see: <http://www.global-change-ecology.de/> (--> Study --> Programme Structure).

Course Details

Course organisation

Teaching is organised in groups of modules. The focus within and between these groups can be set individually.

Module group O "Global Change Ecology Overview"

Module group A "Environmental Change"

- A1 Climate Change
- A2 Ecological Climatology
- A3 Extreme Events and Natural Hazards
- A4 Changes in Aquatic Ecosystems
- A5 Changes in Agroecosystems
- A6 Biogeochemical Fluxes
- A7 Rhizosphere Research
- A8 Biodiversity in the Tropics

Module group B "Ecological Change"

- B1 Biogeography and Macroecology
- B2 Biodiversity and Ecosystem Functioning
- B3 Disturbance Ecology
- B4 Spatial Ecology
- B5 Global Change Impacts on Species Distributions
- B6 Soil Carbon and Global Change
- B7 Remote Sensing in Landscape Ecology
- B8 Dynamic Vegetation Ecology
- B9 Paleoecology and Paleobiology

Module group C "Societal Change"

- C1 Climate Policies and Economics
- C2 Ecosystem Services and Biodiversity
- C3 Global Economy
- C4 Global Policy and Governance
- C5 Socio-Economic and Political Dimensions of Global Change
- C6 Sport Ecology
- C7 Land Use Policies, Markets, and Ecosystems
- C8 Biodiversity, Climate Change and Health

Module group F "Free Choice"

Module group M "Methods"

- M1 Introduction to R
- M2 Statistical Modelling with R
- M3 Vegetation Science
- M4 Foundations of Biogeographical Modelling
- M5 Remote Sensing
- M6 Time Series Analysis
- M7 Research at the Natural and Social Science Interface
- M8 Ecosystem Services Assessment of Landscapes
- M9 Life Cycle Assessment of Products
- M10 Scientific Writing
- M11 Project Management
- M12 Introduction to GIS
- M13 Advanced Geostatistical Methods
- M14 International Environmental Law

M15 Science and Communication
M16 Modelling Ecosystem Functions with the Soil Water Assessment Tool
M17 Academic Working Methods and Skills
M18 Field Course in Vegetation Science
M19 Quantitative Methods
M20 Methods in Dynamic Vegetation Ecology
M21 Spatial Statistics and Visualisation with R

Module group S "International Science Schools"

Module group I "Internships"

Master's thesis (students can also use the Master's thesis as a first step towards their PhD)

Teaching methods: lectures, seminars, participation in research projects in lab and field, e-seminars, interactive internet courses, small teaching units, one-to-one interview

For further information, please see: <http://www.global-change-ecology.de/> (> Study > Teaching modules), (> Study > Teaching courses) and (> Regulations > Handbook of modules).

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International elements	<ul style="list-style-type: none"> • International guest lecturers • Study trips • Projects with partners in Germany and abroad • Training in intercultural skills
Integrated internships	<p>At least one internship with a duration of either six or twelve weeks is mandatory. Internships can be completed both within Germany or abroad. They can be based in an economic setting, in science, in administration or in an international organisation. Several Global Change Ecology partners facilitate internships for students:</p> <ul style="list-style-type: none"> • internship in an economic setting • internship in science (e.g. Centre for Environmental Research UFZ Leipzig, German Aerospace Center DLR Oberpfaffenhofen, Potsdam Institute for Climate Impact Research PIK Potsdam, Forschungszentrum Jülich) • internship in administration (e.g. Federal Environment Agency of Germany, Federal Agency for Nature Conservation Germany) • internship in an international organisation (UNFCCC, WWF, IUCN, FAO, UNEP)
Special promotion / funding of the programme	<ul style="list-style-type: none"> • Other (e.g. state level)
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	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/nach-deutschland/voraussetzungen/en/9198-financing/>.

Funding opportunities within the university

Yes

Description of the above-mentioned 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

Academic admission requirements include an excellent Bachelor's degree in biology, geography, geoecology, environmental science, international economics & development, philosophy & economics, physics, law or equivalent graduation such as hydrology, meteorology, environmental physics, environmental informatics, landscape ecology, forestry science, agricultural science.

Applicants must successfully pass an aptitude assessment test consisting of two parts. There is a pre-selection by means of the application documents (motivation letter and Bachelor's transcript of records) and, in case of a positive result, a colloquy. Both the letter of motivation has to be written and the colloquy has to be attended in English.

For further information, see: <http://www.global-change-ecology.de> (--> study --> application).

Language requirements

Applicants must speak English fluently. The individual language skills will be evaluated in the aptitude assessment procedure (through the letter of motivation and individual interview).

Application deadline

Application period for all students
1 March to 15 June

Submit application to

Online application through CAMPUSonline. You can find further details via [this link](#).

Services

Possibility of finding part-time 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 team](#) provides 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.uni-bayreuth.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
- Buddy programme
- Tutors
- Visa matters

General services and support for international students and doctoral candidates

The "[Friends of GCE e.V.](#)" alumni association supports students in various ways and helps them to build up an international network.

Supervisor-student ratio

About 30 students are admitted per study year, and 22 lecturers teach and regularly supervise the students together with two coordinators.



©Daniel Kachelriess

Daniel Kachelriess
Marine Species Officer at
CITES Secretariat

The flexibility within the curriculum of Global Change Ecology allowed me to pursue my individual interests and develop my professional specialisation through programmes such as summer schools and internships, while also building a shared knowledge base with interdisciplinary fellow students.

Our Partners



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=vWle6FHIR5k>

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-kind [campus](#) 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 and [working](#) 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 & Innovation](#) was 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

Global Change Ecology / Biogeography

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🌐 Course website: <https://www.bayceer.uni-bayreuth.de/gce/>

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

🐦 <https://twitter.com/unibt>

🌐 <https://de.linkedin.com/school/university-of-bayreuth/>

📷 <https://www.instagram.com/uni.bayreuth/>

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International Programmes in Germany - Database

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

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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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