



Biodiversity Sciences

Master's study programme

General Information

Degree	Master of Science (M.Sc.)
Credit points	120 CP
Standard period of study	4 semesters
Start of studies	Winter semester only
Form of study	Classroom teaching, Full-time studies, International study programme
Medium of instruction	English
Admission	restricted (Uni-NC)
Specific admission requirements	yes (Details)
Faculty	Naturwissenschaftliche Fakultät I - Biowissenschaften
Institute	Institut für Biologie
Accreditation	accredited

Programme Objectives

The international master's programme *MSc Biodiversity Sciences* aims to scientifically convey how the state and changes of biodiversity can be quantified across space and time, what evolutionary and ecological processes underlie them and what consequences arise from biodiversity changes for humans. Biodiversity forms the foundation for all ecosystem functions and human well-being on Earth. While the study programme is based on the fundamentals of the natural sciences, it has a strong interdisciplinary component. In the last decades, we have encountered a dramatic loss in and restructuring of biodiversity. As biodiversity and its change are strongly linked to society, the programme has a strong interdisciplinary component, addressing the options of how biodiversity can be maintained and integrated into the management of our planet's resources. To achieve these goals, various disciplines are engaged in the master's programme, from organismic to molecular biology, biogeochemistry, landscape ecology, natural resource management and bioinformatics to interfaces with socio-ecological sciences.

Students acquire the skills to collect, statistically analyze and visualize biodiversity data themselves. They will gain an understanding of the different levels of biodiversity, which includes genetic diversity as well as the diversity of species, habitats and functions. This is achieved, on the one hand, by teaching theories and data analysis, and, on the other hand, through laboratory practicals, field studies and excursions. The expertise acquired includes a profound knowledge of species, which also enables in-depth specialization in certain species groups, and, in addition, the ability not only to present the research results of biodiversity research scientifically, but also to communicate them to political decision-makers, interest groups and the public and to implement them in practice.



The consecutive study programme has a strong research orientation enabling students to work systematically and scientifically and to conduct independent scientific research. Other important study goals are interdisciplinary knowledge as well as communication and teamwork skills. The international character of scientific research is taken into account by conducting the study programme, i.e. the lectures and examinations, entirely in English.

Study in Halle!

The study programme is embedded in numerous research projects carried out at Halle University (MLU). MLU together with partner research centres, such as the [German Centre for Integrative Biodiversity Research \(iDiv\) Halle-Jena-Leipzig](#), offer a high number of research platforms that are open for students' projects. iDiv is a global hotspot in biodiversity science, with about 800 scientists in Central Germany working jointly and across disciplines on the key questions of biodiversity science.

In this context, *MSc Biodiversity Sciences* promotes cooperation between the various master's programmes in the field of biodiversity sciences at the universities of the Halle-Jena-Leipzig university network. Participation in modules in the corresponding study programmes is encouraged and can be recognised.

Career Opportunities

MSc Biodiversity Sciences qualifies for positions in the following areas:

- Basic research on all aspects of biodiversity
- Subject-specific teaching tasks
- International development cooperation on biodiversity conservation
- Private sector: consulting, management and planning
- Public sector: biodiversity monitoring and administration
- Political consultancy

The programme also qualifies for PhD positions.

Accreditation

This study programme is accredited ([details](#)).

Programme Structure

The study programme is structured as follows:

- Compulsory modules (45 CP)
- Elective modules (45 CP)
- Final module (Master's thesis and Public defense) (30 CP)



Modules

Compulsory modules (75 CP)

Module	CP	rec. sem.
Design of Research Studies	5	1
Statistics in Biodiversity Sciences	5	1
Excursions in Botany and Zoology	5	2 or 4
Research Internship	15	2 or 3
Project Study	15	3 or 4
Final Module (Master's thesis and Public defense)	30	3 or 4

Project modules (Elective modules) (45 CP)

Module	CP	rec. sem.
Project modules offered by the Institute of Biology		
Methods of Systematic Botany	15	1 or 3
General Zoology	15	2 or 4
Field Ecology	15	2 or 4
Nature Conservation	15	2 or 4
Spatial Ecology and Modelling	15	1 or 3
Evolutionary Animal Ecology	15	2 or 4
Collections and Biodiversity Research	5	1 or 3
Project modules offered by Institute of Geosciences and Geography		
Environmental Modelling and Simulation	5	2 or 4
Land System Science 1: Global Environmental Change	5	1 or 3
Land System Science 2: Climate and Ecosystems	5	1 or 3
Social-Ecological Systems 1: Spatial Modelling, Scenario Development and Impact Assessment I	10	1 or 3



Social-Ecological Systems 2: Spatial Modelling, Scenario Development and Impact Assessment II	5	2 or 4
Social-Ecological Systems 3: Academic Writing I	5	2 or 4
Social-Ecological Systems 4: Academic Writing II	5	3
Project modules offered by Institute of Agricultural and Nutrition Sciences		
Management of soil organic matter	5	2 or 4
Soil Biogeochemical analysis	5	1 or 3
Matter and material flow analysis	5	1 or 3
Project modules offered by Institute of Computer Science		
Modelling species distribution and biodiversity patterns	15	1 or 3
Statistical Data Analysis and Machine Learning in Biodiversity Research	5	2
Computational Transcriptomics	5	2 or 4
Computational Molecular Phylogenetics	5	3
Computational Sequence Analysis	5	3

The content, learning objectives, workload, requirements and prerequisites of specific modules are published **in the module catalogue and in the study and examination regulations**, respectively.

Admission Requirements

Applicants for the *MSc Biodiversity Sciences* must

- hold a bachelor's degree or equivalent degree (min. 180 credit points) in one of the following fields of studies: biology, ecology, biogeochemistry, landscape ecology, natural resource management or bioinformatics. Graduates of a comparable study programme may also be admitted.
- prove good knowledge of written and spoken English.

Applicants must prove their English language proficiency by submitting either TOEFL, IELTS, Cambridge Certificate, Uncert II, German Abitur or an equivalent internationally recognised language certificate attesting **level B2** according to the Common European Framework of Reference for Languages (CEFR). However, proof of language proficiency is not required if the first degree was obtained in a study programme taught in English.



In addition, admission to the master's degree programme requires proof of comprehensive knowledge in organismic biology and species identification as well as experimental skills or experience in observational studies. Decisions on compliance with the subject-specific requirements and, if applicable, the admission requirements are taken by the selection committee in accordance with the selection regulations.

Basic knowledge in ecology, landscape ecology, biogeochemistry, natural resource management, bioinformatics, mathematics and statistics as well as socio-ecological sciences is strongly recommended.

*This chapter consists of excerpts roughly translated into English. Only **the study and examination regulations** are legally binding.*

Application

The admission to the *MSc Biodiversity Sciences* is currently **restricted** (Uni-NC).

- Applicants with a German bachelor's degree (or equivalent) please apply via www.uni-halle.de/bewerben by **15 July**.
- Applicants with a bachelor's degree (or equivalent) from abroad please apply via www.uni-assist.de by **15 June**. > **Information and Application procedure**

Required documents

The following documents must be submitted with the application for admission:

1. A hard copy of your bachelor's degree or equivalent (i.e., graduation certificate and transcripts). **Important note:** Applicants via uni-assist upload their certificates and transcripts (both in original language and official translations, unless the originals are in English or in German) with their online application. For those applicants it is not necessary to hand in any additional hard documents.
2. Halle University does accept provisional graduation certificates, if your degree is scheduled after the application deadline. Please submit your transcripts indicating minimum 2/3 of your total credits to be passed / your senior student stage, accordingly. The final graduation certificate shall be submitted with enrolment, respectively by no later than 31 January in the year following admission.
3. Proof of English language proficiency (see admission requirements)
4. A summary of the bachelor's thesis (as submitted or, if not yet submitted, the current version)
5. Proof of other qualifications, i.e. long-term engagement in nature conservation associations or scientific societies, special taxonomic knowledge and civic activities in the field of biodiversity, programming skills, completed training in relevant occupations (e.g. gardener, forest manager, farmer, animal keeper, ranger, lab technician), and voluntary internships in a relevant field (preferably also abroad).



6. Relevant knowledge acquired with former studies in the following areas (*Please provide additional proof if it is not reflected in your graduation certificate and/or course and grade overview of the undergraduate degree programme*): biology, ecology, biogeochemistry, landscape ecology, natural resource management and bioinformatics

Relevant knowledge will be considered and awarded with ranking points as part of the admission procedure.

For detailed information on the selection procedure, please see www.botanik.uni-halle.de/biodiversity_sciences/.

Fulfilment of the admission requirements does not constitute a claim to a study place for this programme.

If the study programme is subject to admission restrictions and the number of applications exceeds the number of available study places, the available study places are allocated according to the Study Place Allocation Regulations of the Federal State of Saxony-Anhalt (Studienplatzvergabeordnung Sachsen-Anhalt) and the regulations governing the selection procedure for the master's degree programme *Biodiversity Sciences* (selection regulations, i.e. Auswahlordnung) in the currently valid version. In this process, 50% of all study places are awarded to international applicants who do not have the same status as German applicants.

This chapter consists of excerpts roughly translated into English. Only the study and examination regulations are legally binding.

Information for international applicants

For any questions regarding application and admission - except eligibility - please see [website](#) or contact the **International Students Section** (Student Registration Office) via international.students@uni-halle.de.

Programme Advisor

For detailed information concerning the contents, objectives and structure of the programme, please contact the programme advisor.

Prof. Dr. Helge Bruelheide

Institut für Biologie

Am Kirchtor 1
06108 Halle (Saale)

Phone: +49 345 55-26222

Email: helge.bruehlheide@botanik.uni-halle.de



Carolin Plos

Institut für Biologie

Am Kirchtor 1

06108 Halle (Saale)

Phone: +49 345 55-26192

Email: carolin.plos@botanik.uni-halle.de