



Molecular and Cellular Biosciences

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 and summer semester
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	not accredited, accreditation in preparation

Programme Objectives

The international master's programme *MSc Molecular and Cellular Biosciences* aims at providing a broad theoretical and methodological understanding of cellular functions at the molecular level, enabling students to acquire a comprehensive knowledge in one or more areas of molecular and cellular biology.

The study programme is designed to broaden and develop the students' ability to work systematically and scientifically, and to train logic-based analytical thinking in order to enable them to carry out scientific research independently in the molecular biosciences.

Students will acquire knowledge in recognizing and identifying scientific problems, developing structured approaches to address these scientific problems, to solve key questions experimentally and ultimately expand our knowledge of the subject area. In a collaborative and problem-oriented manner, students will be trained in working as a team with colleagues from different disciplines and to apply basic knowledge in a practical way.

The *MSc Molecular and Cellular Biosciences 120 CP* is strongly research-oriented and both lectures and examinations are held in English.



Career Opportunities

The *MSc Molecular and Cellular Biosciences* qualifies for positions in the following areas:

- university research
- PhD positions
- research-oriented institutes
- industry
- production
- administration
- diagnostics
- public service

Accreditation

The study programme is not yet accredited. The accreditation is in preparation.

Programme Structure

The study programme is structured as follows:

- Compulsory modules (45 CP)
- Elective modules: three project modules (45 CP)
- Master's thesis (30 CP)

Modules

The programme covers all aspects relevant for the research and the solution of bioscience-related issues. The curriculum is organised in a way that students are able to graduate from the programme within the regular period of study of 4 semesters.

A: Compulsory modules (75 CP)

Module	CP	rec. sem.
Fundamentals in Molecular and Cellular Biosciences	15	1
Project study 'Molecular and Cellular Biosciences'	15	3
Research internship 'Molecular and Cellular Biosciences'	15	3
Research project module (Master's Thesis) 'Molecular and Cellular Biosciences'	30	4



B: Project modules (Elective modules) (45 CP)

Three project modules (15 CP each) have to be successfully completed, at least two of them from the Institute of Biology's offer (B1).

Module	CP	rec. sem.
B1: project modules offered by the Institute of Biology		
At least 30 CP must be obtained from the B1 elective modules on offer.		
Project module Developmental Biology / Projektmodul Entwicklungsbiologie (MSc)	15	1 or 2
Project module Molecular Animal Physiology / Projektmodul Molekulare Tierphysiologie (MSc)	15	1 or 2
Project module Molecular Genetics of Root Nodulation Symbiosis / Projektmodul Molekulargenetik der Wurzelknöllchen-Symbiose (MSc)	15	1 or 2
Project module Molecular Biology of Organelles / Projektmodul Molekularbiologie von Organellen	15	1 or 2
Project module Molecular Cell Biology (MSc)	15	1 or 2
Project module Molecular Mechanisms in Developmental Genetics / Projektmodul Molekulare Mechanismen in der Entwicklungsgenetik (MSc)	15	1 or 2
Project module Molecular Microbiology / Projektmodul Molekulare Mikrobiologie (MSc)	15	1 or 2
Project module Molecular Physiology of Microorganisms / Molekulare Physiologie der Mikroorganismen (MSc)	15	1 or 2
Project module Molecular Phytopathology and Plant Immunity / Projektmodul Molekulare Phytopathologie und pflanzliche Immunität (MSc)	15	1 or 2
Project module Plant Development and Stress Responses / Projektmodul Pflanzliche Entwicklung und Stressantworten	15	1 or 2
B2: project modules offered by other institutes		
A maximum of 15 CP can be obtained from the B2 elective modules on offer.		
Projektmodul Molekulare Ernährungs- und Ertrags-physiologie der Pflanze / Project module Molecular Physiology of Plant Nutrition and Crop Yield	15	1 or 2
Projektmodul Nukleinsäurebiochemie	15	1 or 2
Projektmodul Pflanzenbiochemie	15	1 or 2
Projektmodul Zellbiochemie und Virologie	15	1 or 2

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 Molecular and Cellular Biosciences* must

- hold a bachelor's degree or equivalent degree in a bioscience-oriented study programme,
- pass the programme-specific test and
- prove good knowledge of written and spoken English.

The bachelor's degree or equivalent degree must have been obtained in a **bioscience-oriented or comparable degree programme** in which knowledge totalling 55 credit points (CP) was acquired in at least four areas belonging to biochemistry, molecular biology, physiology, cell biology, genetics or microbiology.

In addition, applicants must **pass an online test** on the basic knowledge and skills that will be considered for admission to the international master's programme. Participation in the test is automatically registered and the test result is sent to the selection committee. The test contains tasks in the fields of biochemistry, molecular biology, physiology, cell biology, genetics and microbiology, each with equal weighting. The computer-based (online) test is conducted in English by two examiners using the answer-choice method and takes 60 minutes. To pass the exam, 35 per cent of the maximum score must be achieved. The test can be taken at any time during the application period. A passed test is valid for one year and cannot be repeated within this period. A failed test can be repeated at the earliest on the next test date. **You can access the online test here.**

Further information on registration, dates and procedures is published [on the website of the Institute of Biology](#).

Applicants must also prove their **English language proficiency** by submitting either TOEFL, IELTS, Cambridge Certificate, Unicert II, or an equivalent (inter)nationally recognised language certificate attesting **upper B2 level** according to the Common European Framework of Reference for Languages (CEFR) with the following results:

- **TOEFL iBT** (min. 90/120), **TOEFL CBT** (min. 235/300), or **TOEFL PBT** (min. 580/677),
- **IELTS** (min. band 6.5),
- **Cambridge Certificate** (min. 173/230),
- **UNicert II**,
- **equivalent (inter)nationally recognised language certificate** with at least 75% of the maximum score achievable in the respective certificate.

However, proof of language proficiency is not required if the first degree was obtained in a study programme taught in English.

Basic knowledge of the fundamental scientific subjects of physics and maths are strongly recommended.

Decisions on compliance with the admission requirements are taken by a committee appointed by the Faculty Council.



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 (Studienplatzvergabeverordnung Sachsen-Anhalt) and the regulations governing the selection procedure for the master's degree programme *Molecular and Cellular Biosciences* (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.*

Application

The admission to the *MSc Molecular and Cellular Biosciences* 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** for winter semester, and
 - by **15 January** for summer semester
- Applicants with a bachelor's degree (or equivalent) from abroad please apply via www.uni-assist.de (> **Information and Application procedure**)
 - by **15 June** for winter semester, and
 - by **15 December** for summer semester

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, however, by no later than 31 January in the year following admission (winter semester) and 31 July in the year of admission (summer semester), respectively.
3. Participation in the test (see admission requirements) is automatically registered and the test result is sent to the selection committee. If proof of test participation is (additionally) issued, please submit it with the other documents listed.
4. Proof of English language proficiency (see admission requirements).



5. Proof of relevant knowledge acquired with former studies in at least four of the following areas: biochemistry, molecular biology, physiology, cell biology, genetics and/or microbiology (see admission requirements) (*Please provide additional proof if it is not reflected in your graduation certificate and/or course and grade overview*).
6. Proof of 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*):
 - Basic courses in botany, genetics, microbiology, zoology, chemistry, biochemistry, molecular biology and cell biology
 - Thesis: Relevant topic in life sciences (evidence of (experimental) work in molecular biology, if applicable).

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 [the selection regulations](#).

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

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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.

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