



Facts and figures

Start: Winter semester
(Summer semester only in reasonable cases)
Duration: 4 semesters
Degree: Master of Science
Language: English
Admission not restricted

Application and enrolment



Admission requirements

General admission requirements:
www.uol.de/stud/212en

Language skills:
English native speaker or level C1

Application

Application deadline: 30 September (or 31 March)

German university degree:

Online application
www.uol.de/studium/bewerben/master

EU or international applicants:

www.uol.de/en/application/international-students/master

Contact

For questions about the subject/degree programme

Academic counselling for Microbiology
www.uol.de/en/subject-specific-student-advice
info.microbiology@uol.de

Student representatives for Microbiology

www.uol.de/en/student-council-of-the-icbm-masters
master.icbm@uol.de

For questions about your studies

Study and Career Counselling Service
www.uol.de/en/zskb

Basic questions about application and enrolment

Student InfoLine
Phone +49 441 798 - 2728
study@uol.de

Visitor address

Student Service Centre – SSC
Haarentor campus, building A12
26129 Oldenburg
www.uol.de/en/students/service-advice

Further information

Microbiology website

www.uol.de/en/mibi-msc

Degree programmes at the University of Oldenburg

www.uol.de/en/students/degree-programmes

Financing your studies

www.uol.de/en/students/fees/financing-your-studies

Optional period abroad

www.uol.de/en/going-abroad

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Carl von Ossietzky
Universität
Oldenburg

Microbiology

Master's degree



Microbiology (M. Sc.)

Microorganisms have shaped the history of earth and the evolution of life. Even today, they still catalyse most of the chemical reactions on earth and drive the biogeochemical cycles. Microbiology is a rapidly evolving science, but even with the most advanced molecular techniques only a small part of the microbial diversity has been unravelled.

The M.Sc. programme in Microbiology (taught in English) is designed to give German and international students a professional qualification in a field with great potential. The course offers insights into a wide range of microbiological fields with a focus on environmental and marine topics. The students have access to ongoing research programmes in marine science and laboratories with state-of-the-art equipment for chemical analytics, modelling and molecular biology, allowing them to gain a deep understanding of microbial processes in marine ecosystems. The programme provides the students with the skills required to critically assess scientific knowledge and take responsibility for their own decisions and actions. Work in international teams and courses on scientific communication further enrich the students' skillset.

Career opportunities

With the Master's degree a wide range of attractive employment fields is available for microbiologists. Our graduates have excellent opportunities in biotechnological, chemical and food industries, as well as prospects in environmental protection, e.g.

- Waste-water treatment
- Bioremediation
- Evaluating the quality and microflora of soils
- Detecting potential pests
- Academic career (doctorate) at the ICBM in Oldenburg, or in other research institutes nearby

Due to the rapid development of molecular biology, the number of job opportunities is growing every day.

Structure and contents

BASIC MODULES

24 CP

Compulsory modules

Physiology and diversity of microorganisms / 12 CP
Molecular mechanisms and interactions / 12 CP

MAIN MODULES

24 CP

Elective modules

Proteomics / 12 CP
Ecophysiology of prokaryotes / 12 CP
Ecology of marine microbial communities / 12 CP

PROFILE MODULES

18 CP

Elective modules

Physiology of bacteria / 6 CP
Fermentation / 6 CP
Introduction into DNA - sequencing and sequence analysis / 6 CP
Microbial ecology of marine sediments / 6 CP
Methods in aquatic microbial Ecology / 6 CP
Isolation and characterisation of microorganisms / 6 CP
Marine chemical ecology / 6 CP
Techniques in light microscopy and electron microscopy / 6 CP
R programming for (meta-)genomic sequence analysis / 6 CP

RESEARCH PROJECT

24 CP

Elective modules

COMPULSORY

30 CP

Master's thesis module

MASTER OF SCIENCE

120 CP

SEMESTER 1 / 2 / 3

SEM. 4

Specialisation

Within the 2-year course, the students collect a total of 120 credits (CP). The first two modules provide a common grounding in microbial physiology, diversity, molecular biology and ecology, and training in scientific communication. During two 4-week practical courses and seminars (main modules) and three 2-week courses (profile modules), the students gain practical skills in various scientific fields such as bacterial physiology, DNA-sequencing, proteomics, electron microscopy, aquatic microbial ecology, and sediment microbiology.

Finally, the students undertake two independent scientific research projects of 6 weeks, one of which continues as a Master's thesis project for six months.

