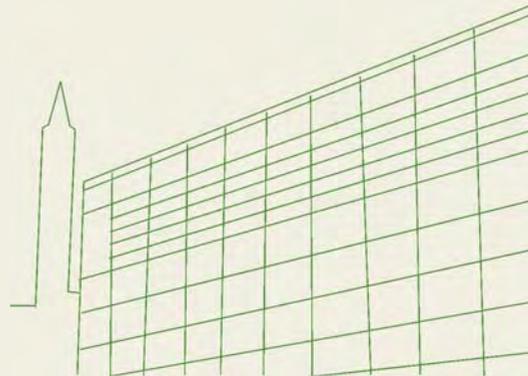




# Ecology Master



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## Description of the Study Program

The Master of Ecology at the University of Bremen is a program for students with a background in biology, ecology or related subjects. All courses are offered in English. The Master of Ecology is multidisciplinary and contains many innovative elements such as a mentoring program, supporting online material, scientific projects, and individual research training.

A particular strength is the broad spectrum of research fields in terrestrial and marine habitats practised by the instructors in the master's program, including biodiversity and conservation research, behavioral ecology, population ecology, plant ecology, marine ecology, soil ecology and environmental risk assessment.

## Admission Criteria and Requirements

The admission regulations specify the admission requirements and selection criteria of the master's program. The information provided below is an excerpt of the admission regulations from January 22, 2014 and refers to winter semester 2018/19. Please recheck the current requirements as they are subject to change: [www.uni-bremen.de/master](http://www.uni-bremen.de/master)

To be considered applicants need to provide:

- A proof of a **bachelor's degree (or equivalent) in biology, ecology, environmental science or a related field**, or have 135 credit points (CP) according to the European Transfer and Accumulation System (ECTS) and expect to finish your bachelor's before starting the Master's program.
- At least **3 CP** of the previous studies have to be specifically in the field of **ecology**.
- A **proof of proficiency in English at the level of C1** (according to the Common European Framework of Reference for Languages CEF) or higher unless the last academic degree was obtained from a university in which the primary language of instruction was English. Information on language certificates accepted as proof of C1-Level can be found at [www.fremdsprachenzentrum-bremen.de/EngZert](http://www.fremdsprachenzentrum-bremen.de/EngZert).

- A letter of motivation (max. 2 pages) stating reasons why you wish to be admitted to the master's program Ecology.

Information on the required application documents (official certification, translation, health insurance, language certificates etc.) can be found at: [www.uni-bremen.de/en/master/faq/](http://www.uni-bremen.de/en/master/faq/)

## **Expected Interests and Qualifications**

Most importantly, students should be enthusiastic about ecology. A good knowledge of basic ecological concepts is important and not being afraid of learning statistics certainly helps.

## **Occupational Fields and Career Opportunities**

The Master of Ecology will provide you with a broad ecological background and will train you to become a critically thinking scientist. Not only will you get extensive research experience qualifying you for PhD studies and an academic career. The acquired scientific, technical and communication skills also open a wide array of additional opportunities. During the program, you will become familiar with many techniques and approaches including field experiments, analysis of animal behavior, scientific writing, advanced statistics, and modern molecular methods.

Occupational fields besides an academic career are governmental and non-governmental organisations involved in nature conservation, environmental risk assessment, or biological control and integrated pest management.

## **Curriculum and Contents of Program**

### **Goals of the Program**

The main goal of the Master's program "Ecology" is the education in the field of ecology, qualifying for both profession and scientific research. The program is interdisciplinary and research-oriented. It conveys a broad spectrum of current ecological essentials and, building on these, provides access to areas of specialization in various ecological sub-disciplines such as plant ecology, behavioral ecology, soil ecology, population ecology, marine ecology or environmental risk assessment.

## Curriculum

The program consists of 4 semesters (two years) including the Master's thesis. The 1st term starts with ecological basics: the main concepts of ecology are covered and also experimental design and data analysis, scientific writing, molecular ecology and an introduction to current topics in cutting edge ecology. Specialization is offered with an individual choice of courses during the 2nd and 3rd semester, including behavioral, population, vegetation, cognitive, soil or marine ecology, as well as conservation biology, risk assessment, or ecological modelling. Excursions are also part of the curriculum as is a research project in close collaboration with one of the ecological working groups. Especially during the 3rd semester, students have the possibility to study at one of our partner universities abroad. The master's thesis is conducted during the 4th semester, either at the University of Bremen or at one of our partner universities, depending on the student's interests.

A course catalogue providing detailed module descriptions can be downloaded from our website: [www.unibremen.de/msceecology/](http://www.unibremen.de/msceecology/)

Each **module** has a certain number of credit points reflecting the average work load of a student for the module in question. 1 CP corresponds to 30 hours of work including the times of presence at the university, but also the time necessary for preparation, reading, home exercises, learning for the exam etc. A module is a coherent teaching unit about a specific topic that may consist of only one course or combine several courses including lectures, seminars, practical exercises and excursions. Modules can be compulsory or elective.

Each semester on average 30 CP should be accomplished. Over the course of the 4 semesters (2 years) totally 120 CP need to be acquired.

## **Compulsory and Elective Modules**

The basics of the research-oriented education program are composed of a profound training in the planning and statistical analysis of ecological investigations and also in general scientific skills, which is above conventional standards. This is complemented by various methodical approaches to experiments and observations both under field conditions and in the laboratory. Also, this course of studies systematically conveys the use and implementation of ecological knowledge. The complexity of this field of study will be accommodated by a strong interconnectedness of the different sub-disciplines, thus enabling individual tracks with different emphases, such as plant ecology, behavioural ecology, soil ecology, population ecology, marine ecology or environmental risk assessment.

Universal skills, not necessarily restricted to science or biology, such as experimental/project planning, communication and presentation techniques shall be conveyed in some basic seminars, related to the general studies modules of the bachelor's course of study. These will help the future ecologists towards a successful qualification and orientation in their profession.

## **Research Project**

A major element of our study program is the research project. It allows the student to work on a current topic in an ecological sub-area of choice. The project is conducted mostly in independent group work, skilfully guided by a supervisor. In this way, the students gain basic experience in the planning, execution, analysis and written description of a research project, already before starting the Master's thesis. The project can be carried out at Bremen University or at one of our partner universities.

## Time Scheme

Week 1	2	3	4	5	6	7	8	9	10	11	12	13	14	Concurrent courses or semester break
1st Semester (Winter semester)														
Concepts of Ecology (Module 401, 3 CP)*	Experimental Design and Data Analysis (Module 402, 12 CP)*					Exam week	Scientific Writing (Module 418, 6 CP)*				Molecular Ecology (Module 404, 9 CP)*	Current Topics in Ecology 1 & Mentoring (Module 405, 3 CP)*		
2nd Semester (Summer semester)														
Population Ecology (Module 411, 9 CP)*		Behavioral Ecology (Module 413, 6 CP) Vegetation Ecology and Conservation Biology (Module 415, 6 CP) Long / Short Ecological Excursion and Field Course (Module 414, 3 CP / 417, 6 CP) Soil and Ecosystem Ecology (Module 416, 6 CP)												
		Research Project (Module 412, 12 CP)* (May be started in any of the blocks or after the teaching term)												
3rd Semester (Winter semester)														
Environmental Risks and Ecotoxicology (Module 408, 6 CP) Marine Ecology Excursion (Module 511, 6 CP)										Introduction to Behavioral Ecology (Module 406, 3 CP) Basics in Biodiversity (Module 407, 3 CP) Advances in Biodiversity (Module 410, 6 CP) Current Topics in Ecology 2 & Mentoring (Module 505, 3 CP) Tutorial Module (Module 509, 3 CP) Coral Reef Ecology (Module 508, 3 CP)				
4th Semester (Summer semester)														
Master Thesis and Defense (Module 510, 30 CP)*														

\*- compulsory courses (401, 402, 404, 405, 411, 412, 418, 510)

## Typical Learning Formats

Our courses consist of theoretical and practical parts, but also include assisted self-tutoring. The following methods of instruction will be used:

**Lectures** serve as a way to systemically convey academic knowledge as well as methodical and practical skills. They are based on lecture notes, text books, presentation slides and other materials and further the coherent presentation and reflexion of the topic. The usage of literature, both before and after the lectures, as well as exercise, is essential for comprehension.

**Tutorials** consist of the independent work through study material, the communication of knowledge and skills and the education concerning field methods. The instructor oversees the tutorial, gives out tasks, checks the actions of the students and leads the discussion. The students train their skills and methods, work on contributions and communicate these.

In comparison to the other types of courses, **seminars** emphasize a more self-dependent kind of scientific work. Complex questions will be developed; presentations of a problem will be considered with scientific methods in alternation between lecture and discussion. The goal is to improve the students' skills in using literature as well as communicating complex contexts, both orally and in writing. Seminars are organized as a chain of lectures, which are held by the students and are discussed by all attendants.

**Practical training** (co-op programs and field courses) is an essential part of the education, and serves to gain practical skills and abilities to solve empirical and experimental assignments both in the laboratory and under field conditions. In the co-op programs the focus lies on the acquirement and appliance of the chosen area's basics.

**Field excursions** give insights in the occurrences of plants and animals in the ecosystematic context, enhance the knowledge of species and their habitats, and also introduce the possible fields of profession. They are conducted within a module, naturally mostly in the summer terms.

**Colloquia** include lectures held by both external lecturers and, less often, tutors of the master's program "Ecology". As an exception, students of the master's program will also be integrated. Primarily, colloquia provide the

opportunity to get to know researchers and research projects of other universities and non-university institutes.

**Assisted self-tutoring** consists of the independent work of the students on recommended materials (literature, lecture notes, programs for e-learning etc.). In doing so, they are individually supported by the instructors, for example by intensive counsel regarding the focus of the presentation of a problem, by assistance at finding a solution, by the evaluation of first approaches toward a solution and by the mutual identification of the necessary amount of learning of each student. The students are informed when and how they can rely on the active support of the instructors (by announcements in the list of lectures, extended consultation times, net-based help, chat rooms etc.).

These methods of instruction can be presented in various combinations, including the assisted self-tutoring. They will be communicated to the students not later than the start of the term, if they were not appointed in the module description or the list of lectures in the first place.

## **Language of Instruction**

The program is taught completely in English.

## **(Research) Cooperation and Studies Abroad**

Within the scope of the master's program in Ecology, a visit abroad (preferably in the third term) is strongly recommended. For example, the student exchange via the ERASMUS -program may be used for this. The biology department holds ERASMUS-exchange agreements with universities in Sweden, Norway, France and Spain, amongst others.

Students enrolled at Bremen University are free to also take courses at the University of Oldenburg. Scientific cooperations that might allow for conducting projects or the master's thesis abroad exist for example with universities in Canada, Sweden and The Netherlands. Additionally, every research group in the Master's program "Ecology" has international contacts, which will of course benefit the students and postgraduates as well.

## **Start of the Study Program**

Lecture period winter semester 2019/20

October 14, 2019 – February 2, 2020

Christmas break: December 23, 2019 – January 4, 2020

Lecture period summer semester 2020:

April 14 - July 17, 2020

## **Duration of Study**

The master program is a two year course, composed of four semesters and includes 120 CP.

## **Degree**

Master of Science (M.Sc.)

## **Faculty**

The faculty is composed of 15 professors and lecturers.

## **Number of Students in the First Semester**

Limited to 20

## **Fees and Accommodation**

The semester fee will be approximately 350 Euro per semester. It includes the use of public transportation in Bremen and the region around. For current information see [www.uni-bremen.de/semester-contribution](http://www.uni-bremen.de/semester-contribution)

After fourteen semesters of study in an EU- or EEA- country or after reaching the age of 55, students have to pay an additional fee of 500 Euro. Information about the long-term tuition fees can be found at [www.uni-bremen.de/tuition-fee](http://www.uni-bremen.de/tuition-fee)

General information about the city of Bremen and rental accommodation can be found at [www.bremen.de](http://www.bremen.de) and [www.uni-bremen.de/accommodation](http://www.uni-bremen.de/accommodation)

Students moving to Bremen receive 150 Euro as a welcome gift.

For information on study finance and jobs see [www.uni-bremen.de/student-finances](http://www.uni-bremen.de/student-finances)

**Information for international students concerning visa, health insurance and finances** can be found at [www.uni-bremen.de/studentstatus](http://www.uni-bremen.de/studentstatus)

**Information about university services:** [www.uni-bremen.de/consultation](http://www.uni-bremen.de/consultation)

## **Admission and Application**

### **Application Closing Dates**

Winter semester: April 30 (for first semester and advanced)

Summer semester: January 15 (only for advanced)

Applications for the first semester are only possible for the winter semester. Advanced students can apply both for the winter as well as for summer semester.

If your previous bachelor's degree course has not been completed by the application deadline (April 30), it is possible to apply as an undergraduate student, provided you have earned at least 135 credit points out of a total of 180 credit points or an equivalent amount of study points are gained by that date. For preliminary admission, all other requirements with exception of the language proof should be fulfilled. If your application is successful, you will have to provide evidence of having obtained your bachelor's degree and the required language certificates two weeks after the beginning of the master's program at the latest.

### **Applying as advanced student**

Advanced Master students have either already graduated from undergraduate studies, or are currently in the final stages of their Bachelor studies and can show by means of an official Transcript of Studies that they only need another 15 credit points before obtaining their bachelor's degree. In addition to this, advanced Master students have to account for at least 10 CP that are transferrable to the Master's program in question. To be transferrable, credits awarded in undergraduate studies must have been in the same subject as the respective Master's program or obtained in another accordant Master's program.

For Master's programs subject to restricted admission (Z) the required evidence of at least 10 transferrable credit points must be submitted by the end of the deadline.

Any additional deadlines or closing dates for submitting required documents will be notified together with confirmation of admission / registration.

**Applications are to be submitted online at:**

**[www.uni-bremen.de/en/master](http://www.uni-bremen.de/en/master)**

Applications are to be submitted online via the Master Portal of the Admission Office under [www.uni-bremen.de/master](http://www.uni-bremen.de/master). The online application form is activated about 8 weeks before the application deadline. For special applications (for example, admission to a higher semester or special hardship), use only the forms provided online by the University of Bremen. You will be notified of all required documents for enrollment together with the confirmation of admission/registration.

## **Documents Required for Application**

Current admission requirements can be found at [www.uni-bremen.de/en/master/master-of-science.html](http://www.uni-bremen.de/en/master/master-of-science.html)

1. Application form: complete and signed application form (you will receive a printable application form during the online application process)
2. Official academic transcripts: transcripts of records in English or German from all colleges/universities attended (one certified copy)
3. Academic diplomas: certificate of your high school diploma and of further academic diplomas, if applicable (in English or German; one certified copy of each document)
4. A tabular curriculum vitae
5. Professional experience in the field of ecology
6. Letter of motivation

Notice that your application will NOT be processed if items 1-6 are incomplete or arrive after April 30 (or January 15)!

Proof of proficiency in English: applicants whose native language is not English or who have not accomplished their previous degree in the English language are asked to submit a proof of proficiency in English at the European level C1 until two weeks after semester start at the latest.

### **Student and Admission Office**

Contact point for all formalities regarding admission and enrollment, re-registration, leave of absence, change of address.

Visiting address: Bibliothekstraße 1, Verwaltungsgebäude,  
Ground floor

Postal address: Universität Bremen  
Sekretariat für Studierende  
Postfach 33 04 40  
28334 Bremen

phone/fax: +49 421 218-61002/+49 421 218-61125

master@uni-bremen.de

www.uni-bremen.de/master

Visiting hours: Mo, Tue & Thu 9–12 a.m., Wed 14–16 p.m.  
(no advanced notification necessary)

## Contact and Advisory Services

### Internet address of the study program

[www.ecology.uni-bremen.de](http://www.ecology.uni-bremen.de)

### Contact Person

Inae Kim-Frommherz  
Institute of Ecology  
FB 02, University of Bremen  
Leobener Str. UFT  
28359 Bremen, Germany  
+49 421 218-62945  
[inaekf@uni-bremen.de](mailto:inaekf@uni-bremen.de)

### Student Advisory Service

Prof. Dr. Martin Diekmann  
University of Bremen  
FB 2, NW2  
Post box 33 04 40  
28334 Bremen, Germany  
+49 421 218-62920  
[mdiekman@uni-bremen.de](mailto:mdiekman@uni-bremen.de)

### Office of the Examination Board

University of Bremen  
Master of Ecology - Examination Board  
FB 2, Sylvia Köhler  
PO box 33 04 40  
28334 Bremen, Germany  
+49 421 218-62803  
[skoehler@uni-bremen.de](mailto:skoehler@uni-bremen.de)

## **University Services**

[www.uni-bremen.de/consultation](http://www.uni-bremen.de/consultation)

## **Service and Information for International Students**

(accommodation, jobs, finances, language learning)

[www.uni-bremen.de/offers-international-students/](http://www.uni-bremen.de/offers-international-students/)

## **Information and Advice on Visa Matters and Social Security**

[www.inneremission-bremen.de/beratungen/internationale\\_studierende/](http://www.inneremission-bremen.de/beratungen/internationale_studierende/)

[www.uni-bremen.de/bsu/](http://www.uni-bremen.de/bsu/) (see menu: Ausländerangelegenheiten)

## **Student Representatives for the Whole University**

### **General Students' Committee (AStA)**

Services include: Advice on BAföG student grants, social counseling, and childcare

AStA-Etage, Studentenhaus (StH)

[www.asta.uni-bremen.de/asta-services/](http://www.asta.uni-bremen.de/asta-services/)

Last update: 12/2018 (Ka)

# KONTAKT

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## Central Student Advisory Service

Visiting address:

Bibliothekstr. 1, Verwaltungsgebäude  
Ground floor

Postal address:

Universität Bremen  
Zentrale Studienberatung  
Postfach 33 04 40  
28334 Bremen  
Germany

+49 421 218-61160

[zsb@uni-bremen.de](mailto:zsb@uni-bremen.de)

[www.zsb.uni-bremen.de](http://www.zsb.uni-bremen.de)

Advisory hours (no advanced notification necessary):

Mo, Tue & Thur 9–12 a.m.

Wed 14–16 p.m.

Additional appointments by agreement

**\*EXZELLENT.**

Gewinnerin in der  
Exzellenzinitiative