Applied Geosciences

Master's Program at the University of Bremen

Applied Geophysics
Applied Petrology
Glaciology
Geohazards

Renewable Energy Resources
Angewandte Sedimentologie
Hydrogeologie
Ingenieurgeologie

In brief:

Degree: Master of Science (M.Sc.) Applied Geosciences

Duration: 2 years

Admission requirements: B.Sc. in Geosciences

English proficiency B2.2

Teaching Language: English and German

Application Deadline: Feb. 28

Program start: October

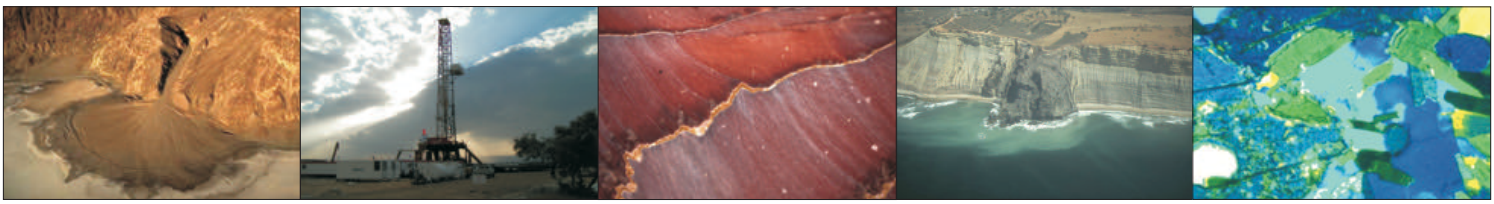
Program

The master's program Applied Geosciences deepens the basic competences after the bachelor with a focus on continental Earth Science and topics like hydrogeology, engineering geology, glaciology and renewable energy resources. A method-oriented teaching enables graduates to work practically and scientifically in a wide range of application fields.

Students choose up to four specializations from a wide range of core subjects with numerous possible combinations. They gain a multidisciplinary understanding of modern geosciences. Training in the field and in advanced digital computer applications round off the spectrum of competences and prepare for a broadly diversified professional career.

Prospects

- Groundwater exploration, contaminated sites remediation
- Foundation engineering, landfill construction, coastline and flood protection
- Exploration of ore deposits and resources
- Geoscientific activities in communal-, state and federal authorities
- Development, characterization and control of mineral-technical products
- Working in the renewable energy resources industry
- Public relations, science journalism
- Scientific activities in research institutes, universities, museums and authorities



Geosciences at the Universität Bremen

The 19 research groups at the Department of Geosciences represent the entire spectrum of modern geosciences. Together with 19 further professorships at the surrounding research institutions, the Department offers excellent conditions for researchers and students. A large laboratory and equipment pool enables up-to-date geoscientific research and affects the teaching, which to a large extent incorporates methods and results of modern research. Integration into international projects and cooperation agreements with renowned research institutes in the region (e.g. Centre for Marine Environmental Research MARUM, Alfred Wegener Institute (AWI), Max Planck Institute for Marine Microbiology, Leibnitz Centre for Tropical Marine Research ZMT, Fraunhofer Institute for Wind Energy Systems IWES, Senckenberg am Meer - Marine Research Department) open up a multitude of opportunities for scientists and students alike.

www.geo.uni-bremen.de

Universität Bremen

Applied Geosciences

Master‘s Program at the University of Bremen

Specialization Offer

CORE SUBJECTS

Modules

APPLIED GEOPHYSICS
Applied Geophysics - Methods
Applied Geophysics - Projects

APPLIED PETROLOGY
Crustal Dynamics and Reservoir Formation
Petrology Methods in Ore Geology

GLACIOLOGY
Glaciology I
Glaciology II

GEOHAZARDS
Hazard - Risk Assessment
Environmental Hazards

RENEWABLE ENERGY RESOURCES
Renewable Energy in the Earth System
Renewable Energy Resources II - Offshore Wind Energy

ANGEWANDTE SEDIMENTOLOGIE
Angewandte Sedimentologie Grundlagen
Angewandte Sedimentologie Projekte

HYDROGEOLOGIE
Grundwasserbeschaffenheit
Grundwasseranalytik und hydraulische Modellierung

INGENIEURGEOLOGIE
Ingenieurgeologie - fortgeschrittene Methoden
Fundamente & Forschungsseminar Ingenieurgeologie /Geotechnik in Wissenschaft und Praxis

...and several more from the master‘s program Marine Geosciences

Professionalization and Complementary Skills

Modules

Advanced Geological Mapping

Advanced Digital Competences

Field and Lab Practice

Complementary Competences

Application

Until Feb. 28 online via https://moin-uni-bremen.de
An aptitude test has to be completed succesfully before the application documents are submitted.

Application documents: Bachelor certificate, transcript of records, motivation letter, CV, English proficiency proof, completed aptitude test, working experience certificates.

Admission results are not published before May.

Program Structure

3-4 core subjects out of 8, each with 2 modules in the 1rst year	adv. mapping +1 to 3 courses in field-, digital- or soft skills	1rst year
Project Exercise	Research Seminar	2nd year
Master Thesis		

The Master's program is designed as a two-year full course of study.
The first year is devoted primarily to deepening geoscientific knowledge in advanced courses. The free choice of three or four out of eight core subjects allows to build up an individual study profile. Even one core subject can be taken from the Master‘s program Marine Geosciences. Participation in an advanced mapping course is obligatory. Furthermore, courses to gain advanced digital competences, more field and lab experience and complementary skills e.g. in languages, economics or law are part of the program structure.
In the second year of study a high degree of self-organisation and independent action is required. The third semester begins with a ten-week project work, which can be designed either as a further mapping exercise, as part of a professional internship, as a small research project or as a media project. A research seminar on the conception of research projects and the presentation of results prepares students for the final phase of their studies. The fourth semester is planned for the Master's thesis. An oral examination in the form of a colloquium concludes the course of study. The course offerings include lectures, seminars, exercises, field exercises and projects, which are combined into modules.

Requirements

- B.Sc. in a geoscientific major
- at least 60 ECTS CP in geoscience
- 30 ECTS CP in science
- a geological mapping course
- English proficiency B2.2
- Ability to work in teams and idependently
- intercultural competence
- first field competences and resilience

Information

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