



University of Potsdam

GEOSCIENCES

Master of Science



Program Content

The Geosciences form an integral part of Earth system research; modern Geosciences are central in the context of societal efforts to adapt to global environmental changes and are therefore highly relevant for social, economic and political decision-making. In the research-oriented MSc program in Geosciences at the University of Potsdam, students acquire in-depth knowledge of modern Geosciences, both as a fundamental science and in their fields of application, as well as gaining interdisciplinary skills. Three majors with several areas of specialization can be selected.

Based on a solid mathematical, physical and chemical knowledge base, students deepen their understanding of the Earth system and the complex interactions of its individual components and processes as well as their temporal variability – from the geological past to the present. Subjects of study include the structure and composition of the Earth, transport processes at the Earth's surface as well as in the Earth's interior, and the economic and (paleo) environmental significance of these processes and materials. Students familiarize themselves with key scientific concepts in the Geosciences and acquire detailed knowledge of the state of research and current methodological approaches in selected fields.

The ability to work together in an interdisciplinary manner is fostered. Personal and transferable skills, e.g. with regard to communication, teamwork, conflict resolution, the independent implementation of projects, and the preparation of reports and presentations, are promoted through varied forms of teaching (lectures, exercises, seminars as well as laboratory and field practicals at localities throughout the world).



Future Career Options

Graduates of the MSc program are prepared for their future activities and tasks in high-level positions at universities, in research institutions, in geoscientific and environmental authorities as well as in associations and non-governmental organizations (e.g. museums, geo- and nature parks). The program also prepares students for leading positions in the private sector, such as large international companies (e.g., energy companies, industrial materials research and rare metals, hazard and risk analysis) and geo-consulting firms (e.g. geographic information systems and remote sensing, groundwater development and protection, subsurface storage and sustainable energy development and utilization).

Research Environment

An emphasis of the program is on consistently analytical and quantitative methods, sophisticated methods of data acquisition in the field and laboratory, and subsequent data analysis, as expected of modern geoscientists today in basic research and in applications outside academia.

The partnership with the neighboring institutes GFZ, AWI and PIK with jointly appointed professors significantly expands the research and teaching portfolio of the Institute of Geosciences. This results in almost limitless, in the truest sense of the word, opportunities for students to participate in research projects.

Program Structure and Curriculum

The master's program in Geosciences at the University of Potsdam is offered as a single-subject program with a standard period of study (full-time study) of 4 semesters and 120 credit points. The master's program includes three majors with the contents shown in the following overview:

Master Geosciences
Major Geology
Topics in Earth System Science
Data Analysis + Advanced Field Practical
Tectonics and Geodynamics
In-Depth Modules Geology I+II
In-Depth Modules Geology III+IV
Practical or Internship
Master Project
Major Geophysics
Topics in Earth System Science
Theoretical Geophysics + Geophysics Laboratory
Geophysical Inversion and Data Analysis
In-Depth Modules Geophysics I+II
In-Depth Modules Geophysics III+IV
Practical or Internship
Master Project
Major Mineralogy and Petrology
Topics in Earth System Science
Advanced Mineralogy and Petrology
Methods in Mineralogy and Petrology
In-Depth Modules Min/Pet I+II
In-Depth Modules Min/Pet III+IV
Practical or Internship
Master Project

Admission Requirements

The prerequisite for a master's degree is a bachelor's degree or an equivalent first professional degree from a university, an equivalent institution in the Federal Republic of Germany, or a foreign university with a standard period of study of at least three years. The bachelor's degree (or equivalent) should have a share of at least 24 credit points in the subjects of geosciences (Earth Science, Mineralogy, Geology, Geophysics or related subject), as well as a total of at least 36 credit points from courses in mathematics, chemistry and physics, with at least 6 LP per subject. Final admission to the master's program is by the Examination Board for Geosciences.

Application and Enrollment

Current information on existing admission regulations, as well as the current application and enrollment process, can be found at:

www.uni-potsdam.de/en/studium/application-enrollment/overview

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