Master of Science in Geography (Mono 120 ECTS)

Interested in studying the environmental, economic, and social issues of our time?

The Master of Science Program in Geography at the University of Bern involves a broad array of courses in Physical Geography, Human Geography and Geographies of Sustainability to deepen your theoretical and methodological know-how. A "research master" means that your Master thesis is embedded into on-going research activities of the research units. It gives you the opportunity to specialise in a field of basic or applied research of your choice. Fieldwork can be done in Switzerland or abroad.

Versatility of the Institute of Geography of the University of Bern

Geography is societally relevant

Geographers build bridges between topics and disciplines. They often take on generalist tasks in a mediatory role between the natural and social sciences, and the arts. The subject's many connections to other disciplines and the skills learned are in high demand in many occupations. Geographers find employment in the government administration, in the private industry, in NGOs, in Development Cooperation, in consulting, as well as teaching at high school level. At the same time, Geography offers many opportunities to enter an academic career and specialise in one of the various fields of research.

Courses and Thesis

The Master Program in Geography contains 120 credits (ECTS) and it is designed to provide both specialised and interdisciplinary knowledge. It comprises 60 ECTS of coursework and a Master Thesis of 60 ECTS. Most of the coursework should be done in the first year. You can select from a wide range of options. An internship (max. 15 ECTS) can be credited to the Master's degree program. We recommend to select the topic of the Master Thesis early, to have sufficient time to write the thesis and to attend the courses that support the chosen topic. The Master's degree program can be completed with a specialisation in sustainability.

Master Programs (120 ECTS)

1st Sem	2nd Sem	3rd Sem	4th Sem

Courses (60 ECTS)
• Field Module (5 E)
• Methodological Module (min. 6 E)
  • Laboratory, qualitative and quantitative methods, remote sensing, GIS
• Research Units Module
  • courses of the research units
  • special offers
  • optional courses (max. 15 E)
• 1 Seminar (5 E)			

	Master Thesis (60 ECTS)		

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Prof. Dr. Olivia Romppainen-Martius

Study advice, proposals, degrees
Sabine Röthlin-Spillmann

UNIVERSITÄT BERN

Master of Science in Geography (Mono 120 ECTS)

Physical Geography

Hydrology – Hydrology aims at understanding and anticipating how climate and land use change interacts with our water resources and related natural hazards, building on a wide spectrum of environmental sciences methods, including field work, GIS analysis, statistics and modelling.

Geomorphology – Understanding of geomorphological processes (debris flows, sediment transport and landslides) in peri-alpine and high mountainous areas allows assessing the hazardous potential of these processes in connection with human activity and habitat, leading to risk analysis and risk management, quantified vulnerability, and risk perception in interdisciplinary collaboration.

Paleolimnology – We use a range of biogeochemical techniques to investigate how lakes have responded to past and current climate and environmental changes. We analyse how micro-pollutants move across different compartment of the environment, how they are transformed, and we assess eco-toxicological risks. The work is mainly experimental, based on analytical lab methods and statistical data analysis.

Climatology – Weather and climate variability in the past, present and future. Historical observations, high-resolution data sets, and climate models are used to better understand high-impact weather (hail, heavy precipitation) and climate (droughts, monsoon systems), their response to disturbances such as volcanic eruptions or greenhouse gases, and their effects on society. Another area of research concerns urban climate.

Soil Science – We focus on the biogeochemical cycling of nutrients and pollutants. Current examples cover the sources and cycling of trace metals and organic pollutants in agriculture and contaminated sites (e.g. industrial sites).

Geocomputation and Earth Observation – We use diverse Earth observation data and models to detect, understand, and predict processes of vegetation, land use, and climate impacts on terrestrial ecosystems and the carbon cycle. The increasing wealth of data and methods in data science holds great potential for new scientific insights and is central to our research and teaching.

Geographies of Sustainability

Land Systems and Sustainable Land Management (LS-SLM) – We analyse biophysical problems and processes leading to the degradation of renewable natural resources (soils, water, biodiversity) in land management systems, and search for solutions in close cooperation with stakeholders and organisations concerned.

Critical Sustainibility Studies (CSS) – focusing on global change, particularly different forms of (im)mobilities, education, work, and governance of ressources involving transdisciplinary collaborations and use of digital technologies, media and art.

Human Geography

Economic Geography – We examine the evolution of urban and regional economies, the ways in which places develop and maintain their economic competitiveness and sustainability, the evolution of firms and industries, and why certain cities and regions manage to develop favourably in terms of long-term viability while others fail to do so.

Political Urbanism and Sustainable Spatial Development – Political Urbanism and Sustainable Spatial Development – Land-use planning is a political process leading to the redefinition and redistribution of rights to the land and land-related resources. We analyze the political dimension of spatial development to understand the challenges linked with new planning objectives, such as densification, the fight against urban sprawl, or the provision of affordable housing.

Social and Cultural Geography – We study how globalization and digitalization transform everyday life with regard to the way we love, care and experience intimacy. We ask how global processes of technological and digital change affect different people and their lives to different extent based on immigration and refugee status, class, gender, sexuality, race, nationality and their location in the global economy.

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