Earth Sciences

Degree conferred
Bachelor of Science in Earth Sciences

Languages of study
Study in two languages, in French and German

Commencement of studies
Commencement of studies only in the Autumn Semester (September)

Access to further studies
Master

For those who are interested in the structure and development of the earth, earth sciences is exactly the right subject to study. Students experience a virtual journey through time and space as they trace the development of the earth, the atmosphere and the oceans.

The Bachelor’s programme places its main focus on the following questions: How did life develop, and under what environmental conditions (sedimentology, palaeontology and palaeoecology)? How do mountains and oceans form and disappear (tectonics)? What happens at the earth's interior (petrology, volcanology, geophysics)? Apart from these fundamental issues, there is also ample opportunity for practical applications, e.g. assessing building land (engineering geology), locating and processing raw materials, or detecting natural hazards. Special emphasis is placed on on-site work at the study-object, i.e. students put what they have learned in lectures into practice on field trips and excursions to nearby areas, as well as to more distant locations (Sardinia, Cyprus). Besides fieldwork, practical training also includes an introduction to the key analytical methods and instruments used in earth sciences. Earth sciences is closely linked to geography, and together they form the Department of Geosciences. This gives students unrestricted access to lectures in fields related to earth sciences such as glaciology or geomorphology in the geography subsidiary programme.

Academic and professional openings
After successfully completing your studies in earth sciences you will have acquired extensive skills and knowledge which will open the door to a wide array of career opportunities. You can work as a professional geologist on construction sites such as the new Gotthard Base Tunnel, or investigate polluted locations to assess the environmental risks they pose. You can search for deposits for international oil and mining companies and accompany extraction processes. You will have the ability to take charge of a cement plant as a specialist for environmental conditions on the earth (sedimentology, palaeontology and palaeoecology), the dynamics of the earth's surface, which cause the formation and disappearance of mountains and oceans (tectonics), and the dynamics of the earth's interior, which are responsible for volcanism and the occurrence of earthquakes (petrology, volcanology, geophysics). Apart from these fundamental aspects of earth sciences, the curriculum also provides plenty of opportunities for the practical application of geology, such as assessing building land (engineering geology), locating and processing raw materials, or detecting natural hazards and initiating countermeasures. Special emphasis is placed on on-site work at the study-object, i.e. students put what they have learned in lectures into practice on field trips and excursions to nearby areas, as well as to more distant locations (Sardinia, Cyprus). Besides fieldwork, practical training also includes an introduction to the key analytical methods and instruments used in earth sciences. Earth sciences is closely linked to geography, and together they form the Department of Geosciences. This gives students unrestricted access to lectures in fields related to earth sciences such as glaciology or geomorphology in the geography subsidiary programme.

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Subject organisation
Structure of studies
150 ECTS credits + 30 ECTS credits in a minor study programme freely chosen, 6 semesters

Curriculum
http://studies.unifr.ch/go/mkY5 (French)
http://studies.unifr.ch/go/0ITFq (German)

Admission
The following Swiss school-leaving certificates grant admission to Bachelor programmes at the University of Fribourg:

http://studies.unifr.ch/enbachelor/sci/earthsciences
• Swiss academic Maturity Certificate
• Swiss vocational or specialised Baccalaureate in conjunction with the supplementary exam certificate from the Swiss Maturity Commission
• Bachelor Degree from a Swiss university, from an accredited Swiss university of applied sciences (HES/FH) or from a Swiss university of teacher education (HEP/PH)

A complete list of all further recognized Swiss school-leaving certificates is to be found on the webpages of swissuniversities (in French and German only): [http://studies.unifr.ch/go/en-admission-swisscertificates](http://studies.unifr.ch/go/en-admission-swisscertificates)

Foreign upper secondary school-leaving certificates are recognised only if they correspond substantially to the Swiss Maturity Certificate. They must qualify as general education. Foreign school-leaving certificates are considered to be general education if the last three years of schooling include at least six general education subjects, independent from each other, in accordance with the following list:

1. First language (native language)
2. Second language
3. Mathematics
4. Natural sciences (biology, chemistry or physics)
5. Humanities and social sciences (geography, history or economics/law)
6. Elective (an additional language or an additional subject from category 4 or 5)

The general admission requirements to the Bachelor programmes at the University of Fribourg for holders of foreign school-leaving certificates as well as the admission requirements for individual countries are to be found on the webpages of swisuniversities: [http://studies.unifr.ch/go/en-admission-country-list](http://studies.unifr.ch/go/en-admission-country-list)

In addition, foreign candidates must present proof of sufficient language skills in French or German.

The assessment of foreign school-leaving certificates is based on the «CRUS Recommendations for the Assessment of Foreign Upper Secondary School-Leaving Certificates, 7 September 2007» ([http://studies.unifr.ch/go/crus07en](http://studies.unifr.ch/go/crus07en)). The admission requirements are valid for the respective academic year. The Rectorat of the University of Fribourg reserves the right to change these requirements at any time.

Alternatives

Also offered as a minor study programme (60/30 ECTS credits).

Contact

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[http://www.unifr.ch/geoscience/geology](http://www.unifr.ch/geoscience/geology)