Earth Sciences

Degree conferred
Scientiarum doctor in scientiis terrarum / Doctor of Philosophy in Earth Sciences (PhD)

Commencement of studies
An application for admission may be submitted at any time.

Regulation
https://studies.unifr.ch/go/1Q *(French and German only)*

Application procedure
Candidates with Swiss qualifications
https://studies.unifr.ch/go/Ui3b4
Candidates with foreign qualifications
https://studies.unifr.ch/go/2KPbe

Fribourg profile

The Earth Sciences Unit of the Department of Geosciences offers doctoral programmes in various fields of Earth sciences.

Areas of research
The Earth Sciences Unit's activities are developing in several fields. One key focus is research on the understanding of carbonate rock formation processes (sedimentology) and the study of the evolution of living organisms (palaeontology and micropalaeontology). These approaches contribute to an understanding of palaeoenvironments, their evolution over time and interactions between the geosphere and the biosphere.
The tectonic group is investigating the formation of mountain ranges and rock deformation mechanisms.
Others are studying the properties of mineral materials and rocks (petrology). This approach has applications in both industrial development and environmental protection (applied mineralogy).

Contents of the doctoral programme
The PhD programme focuses on a personal research project conducted under the supervision of a professor over a period of three to four years. The final product is a doctoral thesis, which is an original written document meeting the requirements for scientific publication. As a general rule, doctoral research projects fall within one of the research orientations of one of the unit's professors. They include field work in Switzerland or abroad in addition to laboratory work. During their research, PhD students participate in national and international conferences and prepare publications. They also participate in teaching (practical assignments, field camps, supervision). PhD students are strongly advised to participate in conference cycles, professional development courses and CUSO doctoral school activities.

Competences acquired
– Developing in-depth knowledge in a field of Earth sciences by mastering specific knowledge, methodological concepts and analytical methods;
– Completing high-quality personal scientific research as part of a large-scale research project;
– Making an innovative contribution to the chosen field and critically evaluating knowledge;
– Teamworking and communicating with the specialised scientific community and society at large.

Positions for doctoral candidates
Open positions are published on the Earth Sciences Unit website (https://www.unifr.ch/geo/en/department/jobs/). Interested persons can also contact the unit's professors to express their interest or propose a research project.

Funding and salary
Doctoral research is financed through a job as an assistant within the unit or by outside funds obtained by the thesis supervisor. PhD students' pay is determined according to the university's salary scale.

Supervisors
PhD theses are supervised by professors and senior researchers from the Earth Sciences Unit and associate researchers from the Jules Thurmann Foundation (Jurassica/Porrentruy):

- **Prof. Anneleen Foubert**

– Sedimentology

- **Prof. Walter Joyce**

– Palaeontology

- **Prof. Esther Schwarzenbach**

– Mineralogy-Petrography

In the field of palaeontology, there is close collaboration with the Jurassica Museum in Porrentruy (Dr Damien Becker and Dr Olivier Maridet).

Studies organisation

Structure of studies

No ECTS credits can be earned.

Doctoral school

https://earth-processes.cuso.ch
https://mineral.cuso.ch

Admission

In order to be admitted to a doctorate the candidate must have been awarded an academic **bachelor's and master's degree** or an equivalent qualification from a university recognised by the University of Fribourg.

Before applying for a doctorate the candidate must contact **a professor** who would be willing to supervise the thesis work.

There is **no general right** to be admitted to a doctorate.

The respective conditions of admission for each doctoral study programme are reserved.

Contact

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Doc- Postdoc-portal

http://www.unifr.ch/phd