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
http://studies.unifr.ch/go/Pm-6g (French and German only)

Application procedure
Candidates with Swiss qualifications
http://studies.unifr.ch/go/0bJpN
Candidates with foreign qualifications
http://studies.unifr.ch/go/4a2qV

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). Archaeometry studies the materials used by man in the past to 
reconstruct ancient technologies and exchange networks.

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://www3.unifr.ch/geo/en/department/jobs/). Interested people 
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:

- Prof. Bernard Grobéty
  – Applied mineralogy
- Prof. Vincent Serneels
  – Archaeometry
- Prof. Annelien Foubert
  – Carbonate sedimentology
- Prof. Walter Joyce
  – Palaeontology
- Adj.Prof. Jon Mosar
  – Tectonics - Geology
- Dr Silvia Spezzaferri
  – Micropalaeontology
- Dr Afifé El Korh
  – Metamorphic petrology

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

Studies organisation

http://studies.unifr.ch/endoctorat/sci/earthsciences
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 by an 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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http://studies.unifr.ch/go/geosciences-research

Doc- Postdoc-portal

http://www.unifr.ch/phd