Mathematics

Degree conferred
Bachelor of Science in Mathematics

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

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

Fribourg profile
The programme of the first two academic years is largely determined by mandatory courses. The main focus consists of a multi-semester lecture series on analysis, algebra and geometry. During the second academic year, introductory courses on applied mathematics, especially numerical mathematics and probability theory, and statistics are added. The courses consist of lectures that serve to quickly and efficiently impart knowledge in a concentrated form and corresponding exercises in which what has been learned is applied independently deepening the knowledge through practical use.

Access to further studies
Master

Profile of the study programme
The origins of mathematics go back to prehistoric times. The science developed from the practical requirements of measuring and counting in trade and industry, from the pursuit of astronomy and geodesy and from the appeal of the principles and laws that were thereby discovered.

This study programme is the first step in the training of professional mathematicians. The methods, ways of thinking and content that, according to international standards, all mathematicians should be proficient in are imparted in an intense and demanding programme. During the third academic year, students can attend advanced lectures that correspond to their interests and preferences. Thanks to close cooperation with the Universities of Bern and Neuchâtel, these courses are also open to students in Fribourg.

The major study programme in Mathematics is supplemented by minors that students can choose freely from other university fields of study.

Learning outcomes and career openings
Due to the wide use of mathematical methods and ways of thinking in very different areas of business, science and administration, there is no fixed professional profile for mathematicians. There are typical fields of work at banks, insurance companies, management consultancies, in schools and universities, authorities and statistical offices, in industrial research and development, in information technology, logistics, meteorology, image processing and security technology.

In addition to in-depth mathematical knowledge, the main focus often lies on the skills that are promoted during the studies: clear, structured and substance-oriented thinking, a systematic, targeted approach to tasks, analytical creativity, capacity for abstraction and the ability to see relationships and to quickly find one’s way with new types of problems and unfamiliar tasks.

Studies organisation
Structure of studies
120 ECTS credits + 60 ECTS credits in one or two minor study programmes freely chosen, 6 semesters

Curriculum
Admission

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

- Swiss academic Maturity Certificate
- Swiss professional Maturity Certificate 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-swiss-certificates)).

**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 swissuniversities: [http://studies.unifr.ch/go/en-admission-countries](http://studies.unifr.ch/go/en-admission-countries). 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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