

## Biochemistry

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### Degree conferred

Scientiarum doctor in biochemia / Doctor of Philosophy in Biochemistry (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

<https://studies.unifr.ch/go/Uj3b4>

Candidates with foreign qualifications

<https://studies.unifr.ch/go/2KPbe>

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### Fribourg profile

The Department of Biology offers a PhD curriculum in Biochemistry. This programme is fully given in English and comprises a personal research project to be taken over 3-4 years. It also includes seminars and lectures according to the bylaws of the *Fribourg Graduate School of Life Sciences and Medicine (FGLM)*.

The biochemistry laboratories at the University of Fribourg put special emphasis on investigating the mechanisms that control homeostasis and growth control in model organisms. They investigate the genes, proteins, and metabolites and their interactions with each other.

Biochemistry is an interdisciplinary science: besides organic chemistry it can also include developmental, evolutionary, and behavioral biology. Students are therefore trained on a variety of modern practical methods (e.g., optical and electronic microscopy, X-ray diffraction, mass spectrometry, and DNA sequencing). Moreover, life sciences benefit from a flow of continuous technical innovation, which renders analytical tools increasingly sensitive and effective. The latest analytical instruments produce data at such speed and in such quantities that simply storing the information require the usage of bioinformatics. As a consequence, PhD students in Biochemistry can analyse and compare their own data with the ones from their peers.

PhD students learn how to conduct a research project in an independent manner. They will also gain competence in interpreting scientific data, presenting them, and putting them into a general context. PhD students participate at national and international scientific meetings in order to broaden their knowledge and to establish a scientific and social network.

PhD students in the Department of Biology are remunerated according to standards of the Faculty of Science and Medicine.

To register to the doctoral programme, candidates select a laboratory in which they plan to carry out their PhD. They read the relevant publications and then contact the group leader to ask for a possible opening.

Alternatively, candidates look for openings that are posted by the FGLM. The selection procedure is carried out twice a year. It comprises a 15-minute oral presentation and discussions with the various group leaders.

A non-exhaustive list of laboratories includes:

- **Prof. Joern Dengjel**

- Protein homeostasis in health and disease

- **Prof. Roger Schneiter**

- Lipid homeostasis in yeast

- **Prof Urs Albrecht**

- Circadian rhythms in mammals

- **Prof Claudio De Virgilio**

- Cell proliferation and growth control in yeast

Please refer to the internet link below for a complete and updated list (see Contact).

### Studies organisation

#### Structure of studies

No ECTS credits can be earned.

#### Doctoral school

<http://studies.unifr.ch/go/phd-fglm>

#### 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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Department of Biology

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<http://studies.unifr.ch/go/biochemistry-research>

**Doc- Postdoc-portal**

<http://www.unifr.ch/phd>