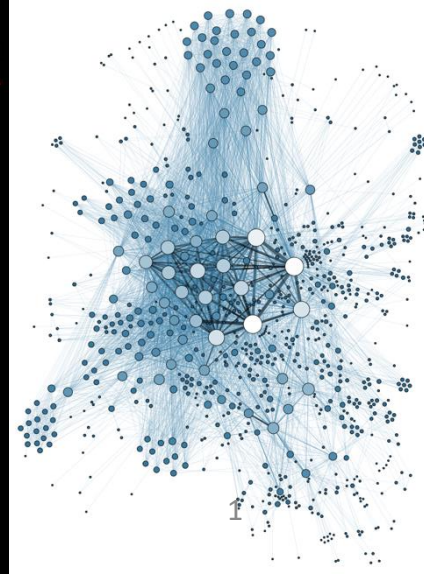
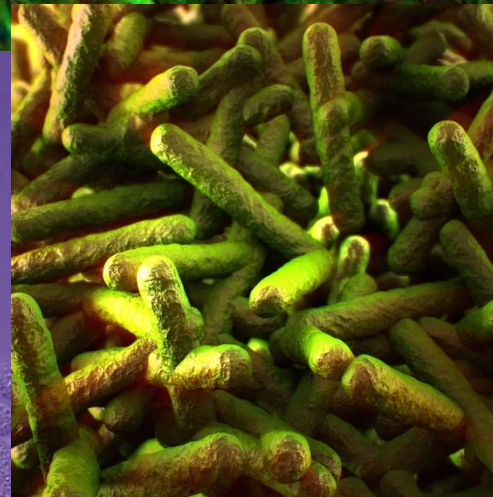
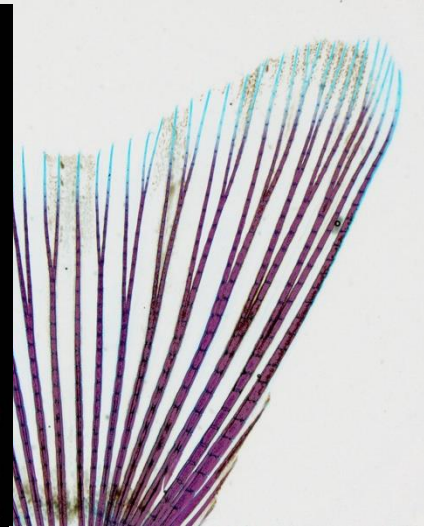
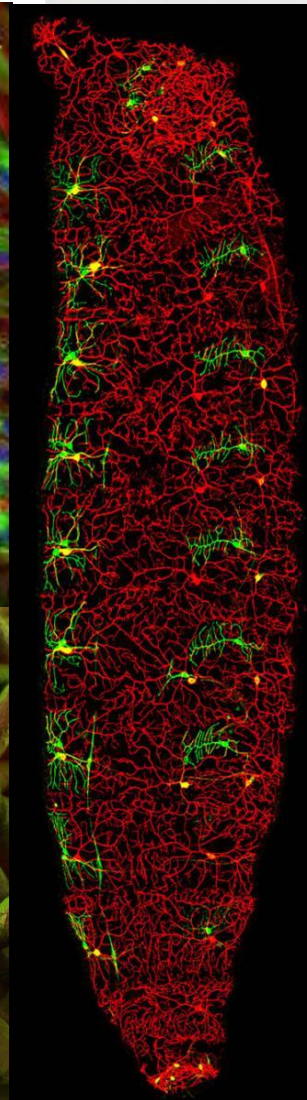
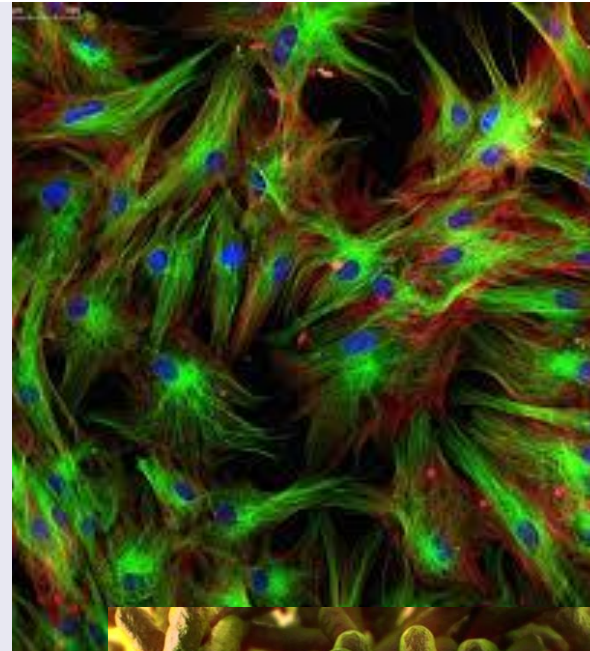
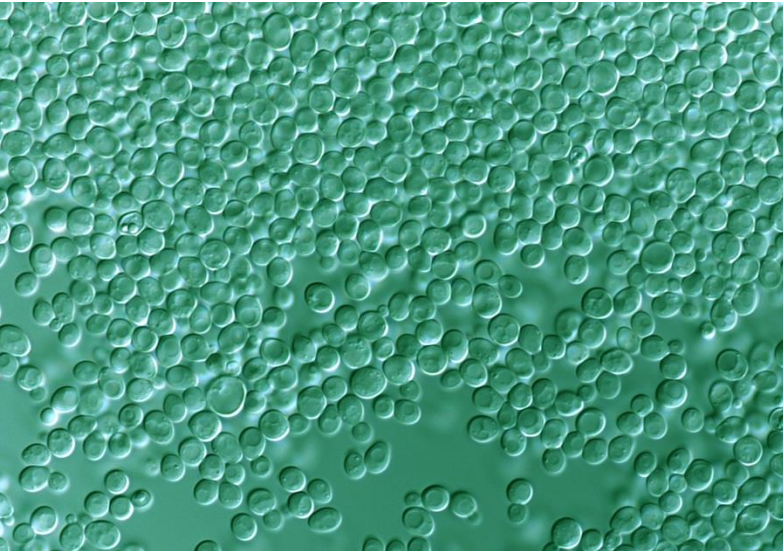


# Welcome to the Master studies in Biology



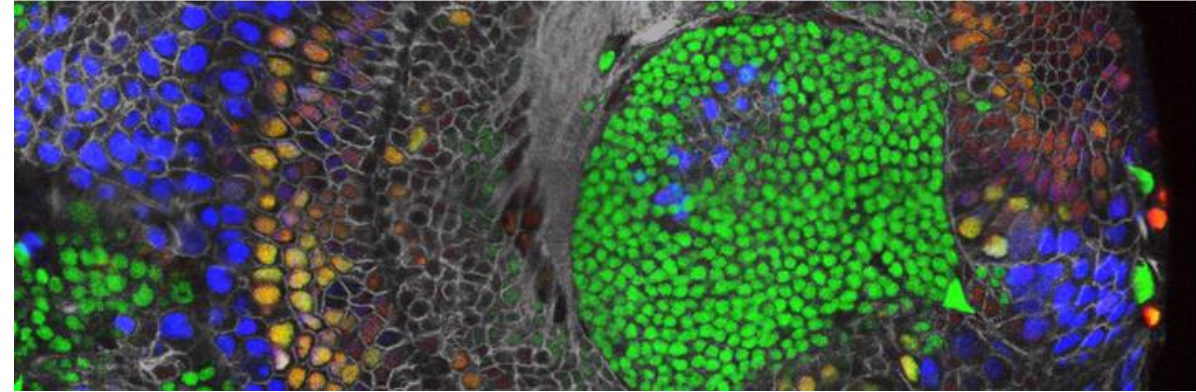
# Biology Master programs at UniFr

**Research MSc in Molecular Life and Health Sciences, 120 ECTS**  
Master thesis 60 ECTS

**Teaching MSc in Molecular Life and Health Sciences, 90 ECTS**  
Master thesis 45 ECTS

**Research MSc in Environmental Biology, 120 ECTS**  
Master thesis 60 ECTS

**Teaching MSc in Environmental Biology, 90 ECTS**  
Master thesis 45 ECTS





## Master in Molecular Life and Health Sciences

Molecular mechanisms govern the fate and the function of every cell, from archaea living in the remotest trench in the ocean, to the highly connected cells of our brain. Interestingly, cells of various origins share common genes, and therefore use similar proteins and molecular pathways. These can be explored in a variety of model organisms and cultured cells, which you will discover in this exciting Master programme that bridges fundamental molecular science and potential applications to understanding human health and disease.

The Department of Biology of the Faculty of Science and Medicine offers a multidisciplinary study programme leading to the degree of

### Master of Science in Molecular Life and Health Sciences

with four research options.

The programme consists of **120 ECTS credits** and corresponds to **24 months of full-time study**.

Students aiming at becoming **high school teachers** and having to acquire 30 additional ECTS credits in a different study domain, can choose the **option "Teaching"** consisting of 90 ECTS (18 months).

#### Available options

1. [Developmental Biology and Regeneration](#) | 120 ECTS
2. [Neurobiology](#) | 120 ECTS
3. [Biochemistry and Cell Biology](#) | 120 ECTS
4. [Marine Biology](#) | 120 ECTS
5. [Teaching](#) | 90 ECTS

#### Degree Conferred

Master of Science in Molecular Life and Health Sciences

#### Language(s) of Study

English

#### Programme Structure

120 ECTS credits

4 semesters full-time

or

90 ECTS credits

3 semesters full-time

#### Programme Start

September or February

#### Student Advisor

Dr Alessandro Puoti

bio-scimed@unifr.ch

#### Additional Information

→ [Regulations](#)

[Apply for Admission](#) →





# Master in Environmental Biology

Major environmental problems, in particular global change and its consequences for biodiversity and ecosystem functioning, are intimately interconnected and pose a threat to our future. Solving these problems requires an integrative and synergistic approach in terms of both fundamental and applied research.

The Department of Biology of the Faculty of Science and Medicine offers a multidisciplinary **Master of Environmental Biology**. The program ranges from fundamental concepts in **ecology and evolution, molecular aspects of plant and microbial sciences to applied solutions for environmental policies and sustainable development**. It provides students with state-of-the-art training and background in conceptual, technical, and applied aspects of environmental biology, from genes to ecosystems.

Master students are integrated into active research teams and can thus gain extensive experience in basic and applied academic research in environmental biology. Students will have the opportunity to choose between four options. English is the official language for all activities.

## Available options

1. [Ecology and Evolution](#) | 120 ECTS
2. [Plant and Microbial Sciences](#) | 120 ECTS
3. [Applied Environmental Biology](#) | 120 ECTS
4. [Teaching](#) | 90 ECTS

## Degree Conferred

Master of Science  
in Environmental Biology

## Language(s) of Study

English

## Programme Structure

120 ECTS credits

4 semesters

or

90 ECTS credits

3 semesters full-time

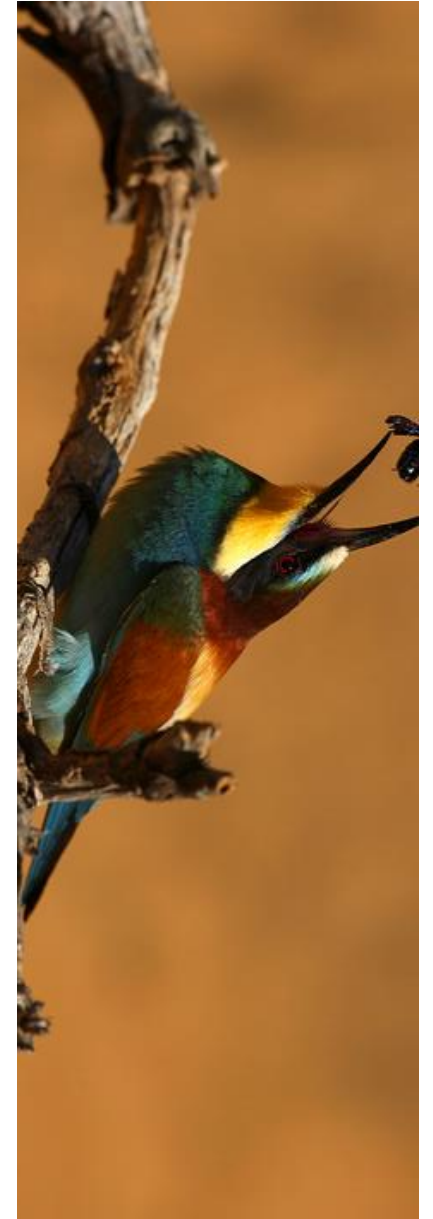
## Programme Start

September or February

## Student Advisor

Dr Alessandro Puoti

bio-scimed@unifr.ch



# Study plans/Curricula

Curriculum for the award of the Degree of

## Master of Science in Environmental Biology

options:

- Ecology & Evolution
- Plant & Microbial Sciences
- Applied Environmental Biology
- Teaching

Accepted by the Faculty of Science and Medicine on 26.04.2021

For every option:

- Compulsory courses\* 37.5 / 50 ECTS
- Recommended / Elective courses 7.5 / 10 ECTS
- Thesis related activities
- Master thesis 45 / 60 ECTS

\* Check table the end of the study plan

<https://www.unifr.ch/scimed/en/plans>

# Study plans/Curricula

Curriculum for the award of the Degree of

## Master of Science in Molecular Life and Health Sciences

options:

- **Developmental Biology and Regeneration**
- **Neurobiology**
- **Biochemistry and Cell Biology**
- **Marine Biology**
- **Teaching**

Accepted by the Faculty of Science and Medicine on 26.04.2021

For every option:

- **Compulsory courses\***
- **Recommended / Elective courses** 36.5 / 49 ECTS
- **Thesis related activities** 8 / 11 ECTS
  
- **Master thesis** 45 / 60 ECTS

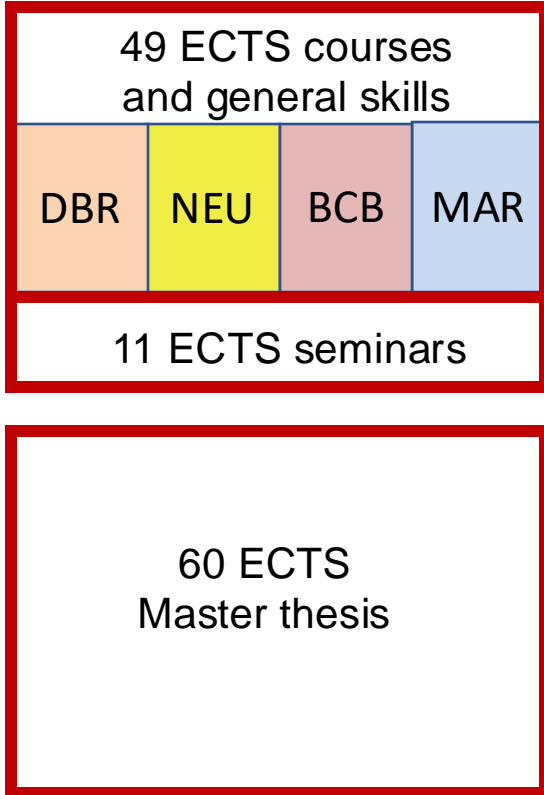
\* Check table the end of the study plan

<https://www.unifr.ch/scimed/en/plans>

# Structure of Biology MSc Programs

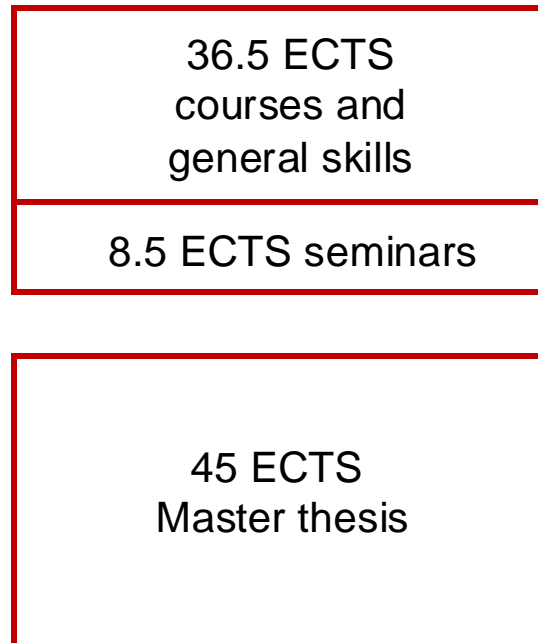
## MSc in Molecular Life and Health Sciences

4 options  
120 ECTS



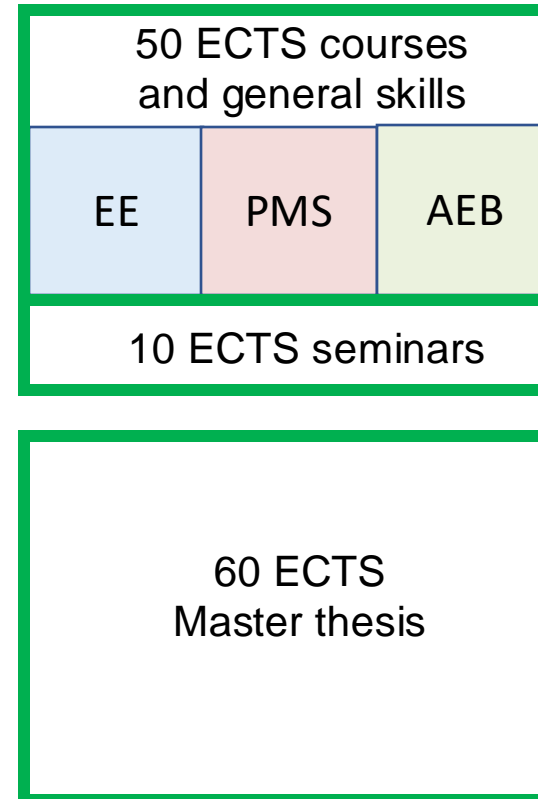
## MSc in Molecular Life and Health Sciences

Teaching  
90 ECTS



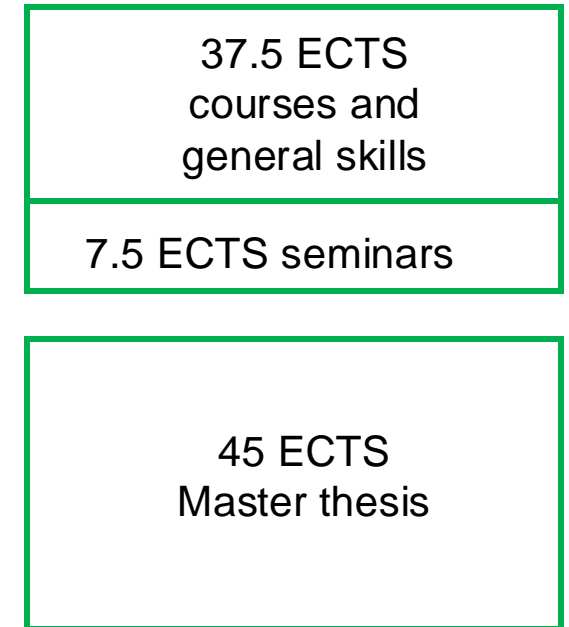
## MSc in Environmental Biology

3 options  
120 ECTS



## MSc in Environmental Biology

Teaching  
90 ECTS



DBR : Developmental Biology and Regeneration

NEU: Neurobiology

BCB: Biochemistry and Cell Biology

MAR: Marine Biology

EE : Ecology and Evolution

PMS: Plant and Microbial Sciences

AEB: Applied Environmental Biology

# General skills

SBL.00504	Basics in biostatistics (if necessary)	(Fall, 1 ECTS)
SBL.30001	Introduction to R	(Fall, 2 ECTS)
SBL.00427	Visual communication of data	(Spring, 1 ECTS)
SBL.20005	Critical reading	(Fall/Spring, 3 ECTS)
SBL.00410	Scientific writing	(Fall, 3 ECTS)
SBL.20001	Biostatistics I	(Fall, 3 ECTS)
SBL.20002	Biostatistics II	(Fall, 3 ECTS)



# Technical skills

SBL.00125	Light and fluorescence microscopy	(Fall, 3 ECTS)
SBL.20003	Methods in plant pathogen interactions	(Fall, 2 ECTS)
SBL.20004	Introduction to metabolomics	(Spring, 2 ECTS)
SBL.00451	Introduction to mass spectrometry and proteomics	(Fall, 1 ECTS)
SBL.00452	Advanced quantitative proteomics	(Spring 2 ECTS)
SBL.06002	Classical models in biology (with exercises)	(Fall, 3 ECTS)
SBC.04203	Genotyping	(Fall, 2.5 ECTS)
SBC.07110	Introduction to UNIX and BASH	(Fall, 2.5 ECTS)
SBC.07107	Bioinformatics (practical + in silico)	(Fall, 3 ECTS)
SBL.05001/2	Master thesis	(45 / 60 ECTS)

<b>MSc in Molecular Life and Health Sciences</b>		<b>AUTUMN SEMESTER 2024</b>			
Options Developmental Biology and Regeneration; Neurobiology; Biochemistry and Cell Biology; Marine Biology; Teaching					
	<b>MONDAY</b>	<b>TUESDAY</b>	<b>WEDNESDAY</b>	<b>THURSDAY</b>	<b>FRIDAY</b>
8.15 - 9.00	<b>SBL.30001</b> (w.5-6 WD) <b>SBC.07110</b> (w.1-2 WD) <b>SBC.07107</b> (w.8-10 WD) <b>SBL.00125</b> (w.11-12 WD)	<b>SBL.00115</b> (w. 5-8)	<b>SBL.30001</b> (w.5-6 WD) <b>SBC.07110</b> (w.1-2 WD) <b>SBC.07107</b> (w.8-10 WD) <b>SBL.00125</b> (w.11-12 WD) <b>HPC</b> (w. 3-4 WD)	<b>SBC.04202</b> (w.9-14)	<b>SBL.00125</b> (w.11-12 WD)
9.15 - 10.00		<b>SBL.00114</b> (w.1-4) <b>SBL.00115</b> (w.5-8) <b>SBL.00130</b> (w.9-13)			
10.15 - 11.00		<b>SBL.00431</b> <b>SBL.00432</b>		<b>SBL.00453</b> (w.2-10)	
11.15 - 12.00					
12.00 - 13.15			<b>SME.05001</b>		
13.15 - 14.00	<b>SBL.10105</b> (except w. 1, 2, 11, 12)	<b>SBL.00117</b>		<b>SBL.30001</b> (w.5-6) <b>SBL.00451</b> (w.13) Reserved for <i>topical courses</i> * <b>SBL.00411</b> <b>SBL.00412</b> <b>SBL.00414</b> <b>SBL.10006</b> <b>SBL.10008</b>	<b>SBL.30001</b> (w.5-6) <b>SBL.00451</b> (w.13) Reserved for <i>topical courses</i> * <b>SBL.00411</b> <b>SBL.00412</b> <b>SBL.00414</b> <b>SBL.10006</b> <b>SBL.10008</b>
14.15 - 15.00					
15.15 - 16.00		<b>SBL.00119</b>			
16.15 - 17.00					
17.15 - 18.00					
18.15 - 19.00					

\**Topical courses* : refer to **moodle page SBL.04000** for details

w: week of the semester. If not specified, whole semester. WD : whole day

SBC.04203 block course: schedule will be arranged with the participants

Block courses SBL.00118; SBL.10009; SBL.30004 are not shown in this weekly schedule

**HPC**: Introduction to High-Performance Computing (UniBe) please see <https://www.philnat.unibe.ch/>

given on week 3 and week 4

This course is also named "HPC and cloud computing", code 46747 HS2023

## Master in Environmental Biology - Autumn semester - Overview

	Block courses <b>Monday</b>	Weekly courses <b>Tuesday</b>	Block courses <b>Wednesday</b>	Weekly courses <b>Thursday</b>	Weekly/Block courses <b>Friday</b>	
8h15 – 9h	<b>Introduction to UNIX and BASH</b> SBL.07110 Weeks 1 to 2 – whole day		<b>Introduction to UNIX and BASH</b> SBL.07110 Weeks 1 to 2 – whole day		<b>Introduction to UNIX and BASH</b> SBL.07110 Weeks 1 to 2 – afternoon	Legend: <b>Obligatory</b> courses for at least one options are in <b>roman</b> <b>Recommended</b> courses are in <i>italic</i>
9h15 – 10h	<b>Introduction to R</b> SBL.30001 Weeks 5 to 6 – whole day	<b>Scientific writing</b> SBL.00410 (9h15 to 11h – weeks 1, 2, and 14) <i>in alternance with</i> <b>Critical reading</b> SBL.20005 (10h15 to 11h)	<b>Introduction to R</b> SBL.30001 Weeks 5 to 6 – whole day		<b>Introduction to R</b> SBL.30001 Weeks 5 to 6 – afternoon	
10h15 – 11h				<b>Biostatistics I - generalized linear models and mixed effects models</b> SBL.20001 <i>in alternance with</i> <b>Biostatistics II - multivariate analysis</b> SBL.20002	<b>Principles of environmental ethics (advanced)</b> SSE.00433	Colour: Research skills Scientific core courses Thesis related activities
11h15 – 12h		<b>Seminars in Biology</b> SBL.00431 & SBL.00432	<b>Organization and annotation of Eukaryote genomes</b> SBL.30004 Weeks 5 to 10 – whole day			In case of discrepancy with the official <a href="#">TimeTable</a> the latter is authoritative
12h15 – 13h	<b>Bioinformatics (practical + in silico)</b> SBC.07107 Weeks 8 to 10 – whole day		<b>Bioinformatics (practical + in silico)</b> SBC.07107 Weeks 8 to 10 – whole day		<b>In vivo biochemistry: visualization of transport</b> SBL.20039 Weeks 1 to 4 – 10h15 to 13h	
13h15 – 14h		<b>Methods in plant pathogen interactions</b> SBL.20003		<b>Global change</b> SBL.20036 <i>in alternance with</i> <b>Invasion biology</b> SBL.20037	<b>Basics in biostatistics</b> SBL.00504 Weeks 1 to 10	<b>Topical courses</b> are not included (usually on Thursday and Friday afternoon). See the corresponding Moodle page
14h15 – 15h				<b>Research Seminars in Environmental Biology</b> SBL.20081 & SBL.20082		
15h15 – 16h						Recommended topical courses: <b>Signalling and Transport</b> SBL.00411
16h15 – 17h	<b>Light and fluorescence microscopy for Life Sciences</b> SBL.00125 Weeks 11 to 12 – whole day		<b>Light and fluorescence microscopy for Life Sciences</b> SBL.00125 Weeks 11 to 12 – whole day		<b>Light and fluorescence microscopy for Life Sciences</b> SBL.00125 Week 11 – whole day	
17h15 – 18h				<b>Introduction to mass spectrometry and proteomics</b> SBL.00451 Week 13 – afternoon	<b>Introduction to mass spectrometry and proteomics</b> SBL.00451 Week 13 – afternoon	<i>HPC and cloud computing (recommended course)</i> Weeks 3 to 4 UniBe

# Lecture support

**Moodle:** <https://moodle.unifr.ch/>

## **SBL.00115 The RNA World [SA 2024]**

### **Enrolment options**

[SBL.00115 The RNA World \[SA 2024\]](#)

#### **The RNA World**

The flow of genetic information goes from DNA to RNA, and from RNA to proteins. How could the first proteins be made if these are needed for transcription and translation? The hypothesis of the RNA world suggests that catalytic RNAs (ribozymes) may have preceded proteins. This lecture will briefly describe the origins of life and emphasize the importance of ribozymes, their mode of action and their roles in today's world. The following, and main part of the lecture covers the mechanism of RNAi interference, the importance of non coding RNAs and the implications of RNA technology.

**Teacher:** [Alessandro Puoti](#)

#### **Self enrolment (Student)**

Guests cannot access this course. Please log in.

[Continue](#)

# Block courses and topical courses

Moodle page SBL.04000 (SA24-SP25)

You can also find the information for a specific course on

**Timetable:** <https://www.unifr.ch/timetable/en/>

This Moodle page has the purpose to coordinate block courses given during the semesters of the

**MSc in Molecular Life and Health Sciences Master programme**

**MSc in Environmental Biology**

Topical courses are given by external speakers on Thursday and Friday afternoon.

Block courses are given over several days, once every year or every second year.

**For the organisers:** Before planning your course, please check if the dates are not already taken. In general, we do not show the rooms on this moodle page. Please refer to the courses on GeFri/Timetable.

Title	Code	Responsible	Semester	Timing	Topical course
Signalling and transport	SBL.00411	Geisler	Autumn	2 afternoons	yes
Introduction to protein function and structure	SBL.00412	Falquet	Autumn	2 afternoons	yes
Cell fate and tissue regeneration	SBL.00414	Jazwinska	Autumn	2 afternoons	yes
Developmental biology of marine animal models (biennial)	SBL.10006	Sprecher	Autumn	2 afternoons	yes
Omics approaches in marine sciences (biennial)	SBL.10008	Sprecher	Autumn	2 afternoons	yes
Introduction to mass spectrometry and proteomics	SBL.00451	Dengjel	Autumn	2 afternoons	yes
Cell proliferation	SBL.00415	De Virgilio	Spring	2 afternoons	yes
Biological rhythms	SBL.00416	Albrecht	Spring	2 afternoons	yes
Microbial metabolism and genetics	SBL.00418	Reinhardt	Spring	2 afternoons	yes
Advanced imaging	SBL.00419	Egger	Spring	2 afternoons	yes
Oceanography and marine ecosystems (biennial)	SBL.00421	Sprecher	Spring	2 afternoons	yes
Polar biology (biennial)	SBL.10007	Sprecher	Spring	2 afternoons	yes
Altered carbohydrate metabolism in disease	SBL.10010	Dengjel	Spring	2 afternoons	yes
Advanced quantitative proteomics	SBL.00452	Dengjel	Spring	2 afternoons	yes
BeFri research colloquium in cell and developmental biology	SBL.00127	Egger	Spring	1 afternoon	no
BeFri research colloquium in cell and developmental biology II	SBL.00128	Egger	Spring	1 afternoon	no
Light and fluorescence microscopy	SBL.00125	Egger	Autumn	5 days, split	no
Established and emerging organisms for marine science	SBL.00126	Sprecher	Spring	10 days, block	no
BeFri research retreat in cell and developmental biology	SBL.00129	Egger	Spring	2 days, block	no
Advanced marine biology practical course	SBL.10009	Sprecher	Autumn	7 days, block	no

# Location, dates and time of teaching units

**Timetable:** <https://www.unifr.ch/timetable/en/>



UNIVERSITÉ DE FRIBOURG  
UNIVERSITÄT FREIBURG

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[Home](#) · [Timetable](#)

## Course catalogue

Teacher, Lesson, code

sbl.00431

Days and hours

Filter by day


Filter by time


Semester


SA-2024 ✕

MASTER | SA-2024 | UE-SBL.00431

### Seminars in biology

 Tuesday 11:15 - 13:00 PER 04, Room 0.110

 Wicky Collaud Chantal

 Faculty of Science and Medicine, Biology

 English

# Location, dates and time of teaching units

Timetable: <https://www.unifr.ch/timetable/en/>

**UNI FR** UNIVERSITÉ DE FRIBOURG  
UNIVERSITÄT FREIBURG

Timetable

Studies Campus Research University Faculties Continuing Education

🏠 · Timetable

## Seminars in biology

Teaching	Dates and rooms	Evaluation	Assignment
Date	Hour	Type of lesson	Place
17.09.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
24.09.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
01.10.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
08.10.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
15.10.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
22.10.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
29.10.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
05.11.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
12.11.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
19.11.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
26.11.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
03.12.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
10.12.2024	11:15 - 13:00	Cours	PER 04, Room 0.110
17.12.2024	11:15 - 13:00	Cours	PER 04, Room 0.110

**UE-SBL.00431**  
Master  
2 ECTS  
SA-2024

↓ Download calendar file

← Back

## Plans

Site Miséricorde

Site Pérolles

Site Beauregard

Site Regina Mundi

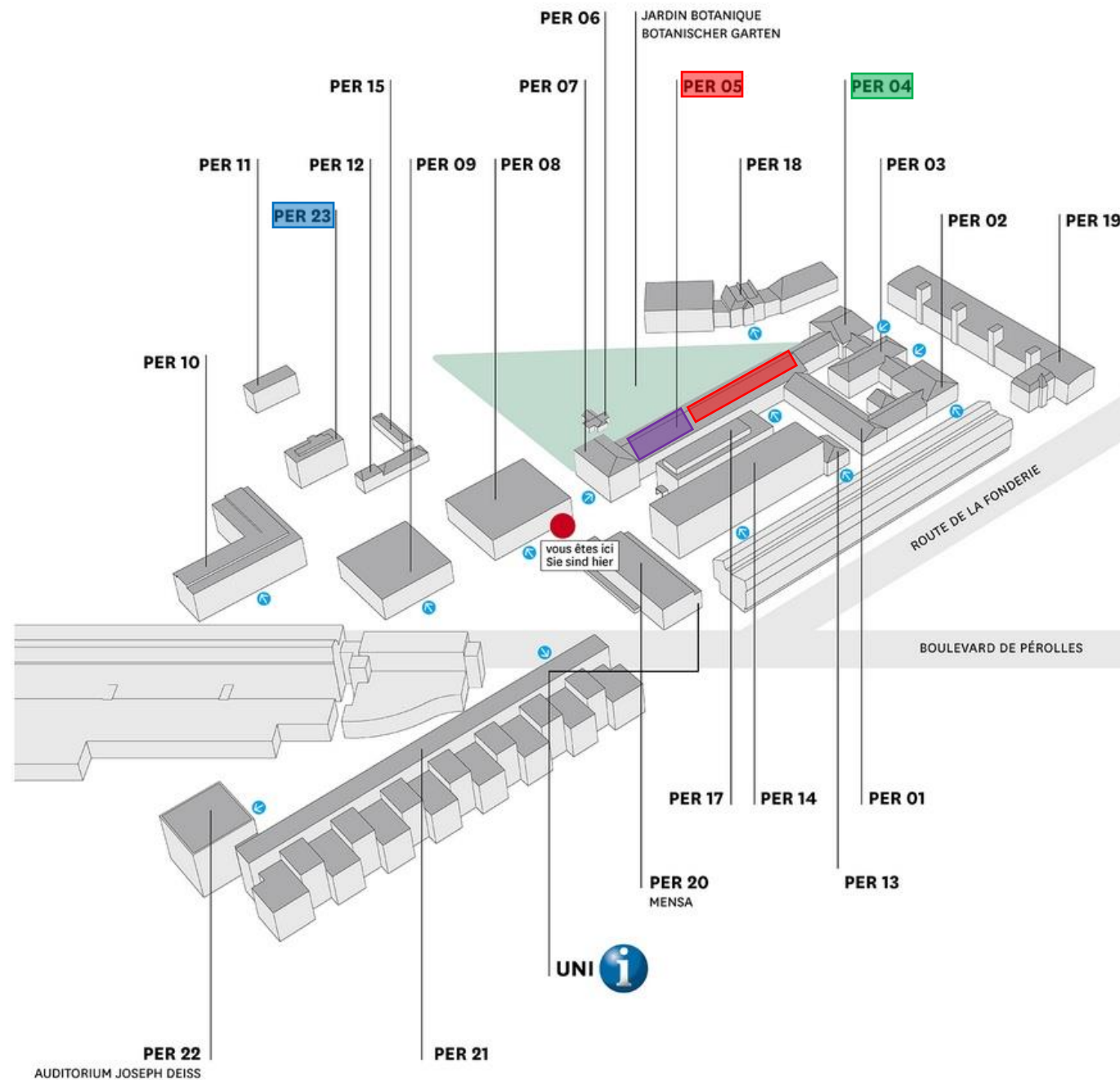
# Site Pérolles

PER 23 : Ecology and Evolution

PER 05 : Biochemistry

PER 05 : Zoology

PER 04 : Plant and Microbial Sciences





# Additional important information

<https://www.unifr.ch/scimed/en/studies/practical/>



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UNIVERSITÄT FREIBURG

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## Studies

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Study advisors

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Transcripts and validations

Reference persons

Register a minor or change study field

Student requests

Complaints and Appeals

Continuing education

Teacher education

Regulations and Curricula

Mobility

Frequently asked questions

## Practical information

Here, you will find information about registrations, validations, switching you study field, student requests, and complaint procedures.



### Study advisors

Advice about study choices and organization as well as mobility.



### Registration

Information about registration to classes, exams and minors.



### Attestations and Validations

Information on how to obtain transcripts and attestations, and how to validate credits.



### Reference persons

Persons to contact with administrative questions about courses and exams



### Register a minor or Change study field

Switching major or minor. Registering a minor



### Student requests

Requesting recognition of previous studies or exemptions to curricula



### Complaints and appeals

Appealing exam results or other decisions

# Language courses

<https://www.unifr.ch/centredelangues/en/courses/semester/>



UNIVERSITÉ DE FRIBOURG  
UNIVERSITÄT FREIBURG

Language Centre

Home Centre Language Courses Self-Learning Bilingue Plus Tests & Certificates

Language Courses Semester courses

## Language Courses

Semester courses

Intensive Courses

Specific Course Law

Testimonials



## Semester courses

Registration for students and employees Unifr

Language courses are open to students from all faculties **except**:

- auditors
- visiting students from other universities (also including BeNeFri), unless they are part of a Mobility Programme
- persons from outside the university (except [partner institutions](#))

[Admission requirements](#)

## Semester Courses

🌐 German, French, English, Italian

👥 Students and employees Unifr and [partner institutions](#)

📅 Weekly courses, during the semester

📈 A1 - C2

### Autumn Semester 2023

Registration period: 04.09. - 01.10.2023

[Course Registration Information](#) →

📌 Students of the University of Fribourg can register directly via **MyUnifr**. For all other groups (employees of Unifr, employees and students of our [partner institutions](#)), course registration takes place via our website.

MSc Biology students often take:

**B2-C1 Academic English  
for Master's Students:  
Presentation, discussion  
and team-working skills**

📅 19.09.2023 - 19.12.2023

📌 Séminaire

🗣️ English

NB. Only credits for English courses can be credited

# Courses in Bern and Neuchâtel

## BeNeFri

### Presentation

The BeNeFri network, as the result of the collaboration between the Universities of Bern, Neuchâtel and Fribourg, allows you to attend courses at both partner universities. This way, you have the opportunity to follow a wide-range of courses and to discover student life at another university.

### Legal basis

All the details are available in the BeNeFri [framework convention](#).

### Registration

Registration to the BeNeFri network is possible for study fields mentioned in the annex to the framework convention.

For further information (study fields, courses, recognitions, etc.), please contact the faculty involved.

Registration requests to BeNeFri courses must be submitted on the [MyUnifr](#) portal within the following deadlines:

- Autumn semester: **30 September**
- Spring semester: **28 February**

**!** Registrations are valid for **one semester only**. You will therefore have to reregister for each semester if you wish to remain registered with the BeNeFri network.

# Courses in Bern and Neuchâtel

## E-account

- **Students coming to UniFR:**

Once the data exchange has taken place between the different universities (early October for the autumn semester and early March for the spring semester), you will receive an SMS from UniFR's IT Department regarding the activation of your e-account.

Enquiries or requests may be sent directly to the [IT-support](#).

- **Students attending UniBE or UniNE:**

The partner university is responsible for your electronic access.

## Reimbursement of travel expenses

You can receive a reimbursement of your travel expenses by public transportation to the partner universities. To do so, please fill in the [form](#) and return it to the Office for Admissions and Registration. Only **full** applications submitted within the following **deadlines** will be considered:

- Autumn semester: **31 January**

- Spring semester: **30 June**

❗ You can benefit from the allowance only if you are **registered with the BeNeFri network** for the relevant semester.

❗ The UniFR participates in the reimbursement of travel tickets according to the following criteria:

- Value of a **2<sup>nd</sup> class half-fare** ticket

- Trips between Fribourg and Bern or Fribourg and Neuchâtel only

❗ In case of at **least 6 trips per semester** the UniFR participates in the expenses of a half-fare travel card or a GA travel card upon presentation of the receipt; the **SwissPass alone is not sufficient**.

# Field courses in South Africa

- Maximum one course per student, 5 ECTS.
- Validation by passed/failed. Requires an oral presentation.
- You need to find a supervisor from our Department to serve as a referee, and to finance yourself.



## THE DISCOVER EDEN SOUTH AFRICA ECOLOGY COURSE

**2024 ECOLOGY COURSE DATES:**

14 June to 02 July  
12 July to 30 July  
02 August to 20 August

**ECOLOGY COURSE COST:** \$3 490 – US Dollar / €3 200 – Euro



## THE DISCOVER EDEN BIG 5 EXPERIENCE

**2024 BIG 5 COURSE DATES:**

14 June to 02 July  
05 July to 23 July  
26 July to 13 August

**BIG 5 COURSE COST:** \$3 490 – US Dollar / €3 200 – Euro



## THE DISCOVER EDEN MARINE BIOLOGY COURSE

**2024 MARINE BIOLOGY COURSE DATES:**

07 June to 20 June  
28 June to 11 July  
19 July to 01 August

**MARINE BIOLOGY COURSE COST:** \$3 190 – US Dollar / €2 900 – Euro

Option Ecology and Evolution

Option Ecology and Evolution  
Option Applied Environmental Biology

Option Marine Biology

NB: • the courses are not listed in the study plans.

- the courses are open only for the options listed above. Other restrictions might apply.

# Why are you here

After the Bachelor, the Master is the second step in becoming a biologist

- Use the knowledge acquired during the Bachelor
- explore a more specialized topic
- switch from a passive to an active attitude
- independent and creative thinking
- learn how to communicate and present your results
- learn how to write a scientific paper in English
- learn how to have a critical approach of your and other's results
- organize yourself in planning experiments

The duration of a 90-ECTS Master in Biology is **3 semesters**, of which **1 year full-time** dedicated to the laboratory work

The duration of a 120-ECTS Master in Biology is **4 semesters**, of which **1.5 year full-time** dedicated to the laboratory work

# Why are you here

The Master widens your job opportunities. Your next step might be in...

- getting a teaching diploma (maturity level)
- starting a PhD
- working or being trained in a pharmaceutical company
- working as a lab manager in an academic research laboratory
- working as a salesperson
- working in patent offices
- working in regulatory affairs
- becoming a medical analyst (FAMH)

Lecture SBL.00420 (spring semester) tells more about looking for, obtaining and preparing a job interview

# Timeline (120 ECTS programmes)

## Semester 1

- Take as many classes as possible (Master courses, complements)
- Start looking for a laboratory (“Master evening” towards the end of November)
- Follow the seminars (mandatory)

## Semester 2

- Start the laboratory work
- Start organizing the written Master’s thesis, literature searches
- Take the mandatory classes offered in the Spring semester
- Take complementary courses, if this applies
- Follow the seminars, give your first progress report

## Semester 3

- Carry on your laboratory work. New questions? New perspectives?
- Read and organize the literature related to your thesis project
- Seminars: mandatory presentations (progress report, Journal club)
- Take additional classes

## Semester 4

- Carry on and bring your laboratory work to an end
- Finish writing the thesis (50-100 pages)
- Take remaining classes
- Prepare and present the Master thesis (30 minutes).



# Timeline (90 ECTS programmes)

## Semester 1

- Take as many classes as possible (Master courses, 30-ECTS minor)
- Start looking for a laboratory (“Master evening” towards the end of November)
- Follow some of the mandatory seminars

## Semester 2

- Start the laboratory work
- Start organizing the written Master’s thesis. Literature study.
- Take the mandatory classes offered in the Spring semester
- Take complementary courses
- Take courses from the 30-ECTS minor
- Follow the seminars, give your first progress report

## Semester 3

- Carry on and bring your laboratory work to an end
- Read and organize the literature related to your thesis project
- Seminars: mandatory presentations (progress report, Journal club)
- Finish writing the thesis (50-100 pages)
- Take remaining classes, if this applies
- Prepare and present the Master thesis (30 minutes).

# Final steps of your Master studies:

- 1) The Master thesis (SBL.05001/2) is carried out with the agreement of the group leader. There is NO circulation of the Master's thesis. The group leader gives the grade to Eirini Maikanti (50% lab work, 25% written thesis; 25% final presentation) on a signed document.
- 2) Thesis-related activities must be entered into GeFri. To do this, prepare a sheet with the different teaching units and have it signed by your group leader (or the relevant teacher). Then transmit to Eirini Maikanti
- 3) Semester fees: If you finish your Master thesis towards the end of a semester, make sure that you have acquired all remaining credits and that you have defended your Master thesis. Even if the correction of the Master thesis manuscript will take some time, you do NOT have to pay one more semester just to get the grade of the Master thesis entered.
- 4) If you later realize that you want to repeat an exam, please pay your bill quickly. The principle is simple: as long as you want to take additional exams or acquire additional teaching, you must be registered.
- 5) To submit the written Master's thesis: We are strict with the form of writing the summary. The writing of the Master thesis is under the responsibility of the group leader. No need to deliver a manuscript to the administration/department. Only to your group leader.
- 6) Validation of the package: You validate your packages (courses, master thesis) when the total 120 / 90 ECTS credits, and all mandatory teaching units have been obtained. The average grade of the package counts ( $\geq 4.00$ )
- 7) Diploma ceremony: The deadline for obtaining the printed diploma is indeed strict: for the ceremony taking place in February, the deadline to pay for the credits is mid-December of the preceding year. Information about the graduation ceremony is on <https://www.unifr.ch/scimed/en/info/ceremonies>

For those who have missed the deadline, an official certification of the credits and the completion of the Master can be obtained at any time with the dean's office.

- 8) You can exmatriculate once you have all the validated packages. This is especially useful when continuing at another university.

# Delivery of the MSc thesis:

- Please follow the procedure as on:

[https://www.unifr.ch/scimed/en/studies/master-\(msc\)/master-thesis.html](https://www.unifr.ch/scimed/en/studies/master-(msc)/master-thesis.html)

Only one copy of the Master's thesis for your group leader.

Usually at this point, Master's thesis-related activities have been validated.

- Time considerations:

<https://www.unifr.ch/scimed/en/validate>

For the master thesis manuscript, the last version must be handed to the group leader **before** the beginning of the new semester, so no more corrections are possible. The final correction and grading by the group leader as well as the MSc thesis defence should be done within the 3-4 following weeks, not later.

# Thesis-related activities

*you can obtain these documents as a pdf file.  
Ask Eirini Maikanti*



MSc in Environmental Biology  
Validation of Thesis-related activities

Option:

**Applied Environmental Biology**

**Ecology and Evolution**

**Plant and Microbial Sciences**

***Teaching*** (relevant codes are italicized in the table below)

Student name: .....

Student N°:.....-.....-.....

Code	Title	ECTS	Validation date	Responsible or Group leader	Signature
SBL.20083 or <i>SBL.20084</i>	Research group meetings				
SBL.20081 or <i>SBL.20082</i>	Research seminars in environmental biology				
SBL.00431 or <i>SBL.00432</i>	Seminars in biology				

Student's signature:

Date:

In order to have the results entered into GeFri, please hand the printed and signed document to Eirini Maikanti.



MSc in Molecular Life and Health Sciences  
Validation of Thesis-related activities

Option:

**Developmental Biology and Regeneration**

**Neurobiology**

**Biochemistry and Cell Biology**

**Marine Biology**

***Teaching*** (relevant codes are italicized in the table below)

Student name: .....

Student N°:.....-.....-.....

Code	Title	ECTS	Validation date	Responsible or Group leader	Signature
SBL.10103 or <i>SBL.10104</i>	Research group meetings				
SBL.10105 or <i>SBL.10105</i>	Research seminars in molecular life and health sciences				
SBL.00431 or <i>SBL.00432</i>	Seminars in biology				
SBL.10100 or <i>SBL.10102</i>	Journal club in molecular life sciences				

Student's signature:

Date:

In order to have the results entered into GeFri, please hand the printed and signed document to Eirini Maikanti.

Most questions can be answered through the following documents/websites:

**Study plans:** <https://www.unifr.ch/scimed/en/plans/master>

**Regulations:** <https://www.unifr.ch/scimed/fr/rules/regulations>

# If you have still not found your answer:

## **Masters in Biology:**

Dr Alessandro Puoti (study advisor)

Department of Biology

Chemin du Musée 10

Laboratory **0.325** (PER05)

1700 Fribourg

[alessandro.puoti@unifr.ch](mailto:alessandro.puoti@unifr.ch)

## **MSc in Bioinformatics and computational biology, and related courses:**

Prof. Daniel Wegmann (study advisor)

Department of Biology

Chemin du Musée 15

Office **1.03** (PER23)

1700 Fribourg

[daniel.wegmann@unifr.ch](mailto:daniel.wegmann@unifr.ch)

## Department secretary

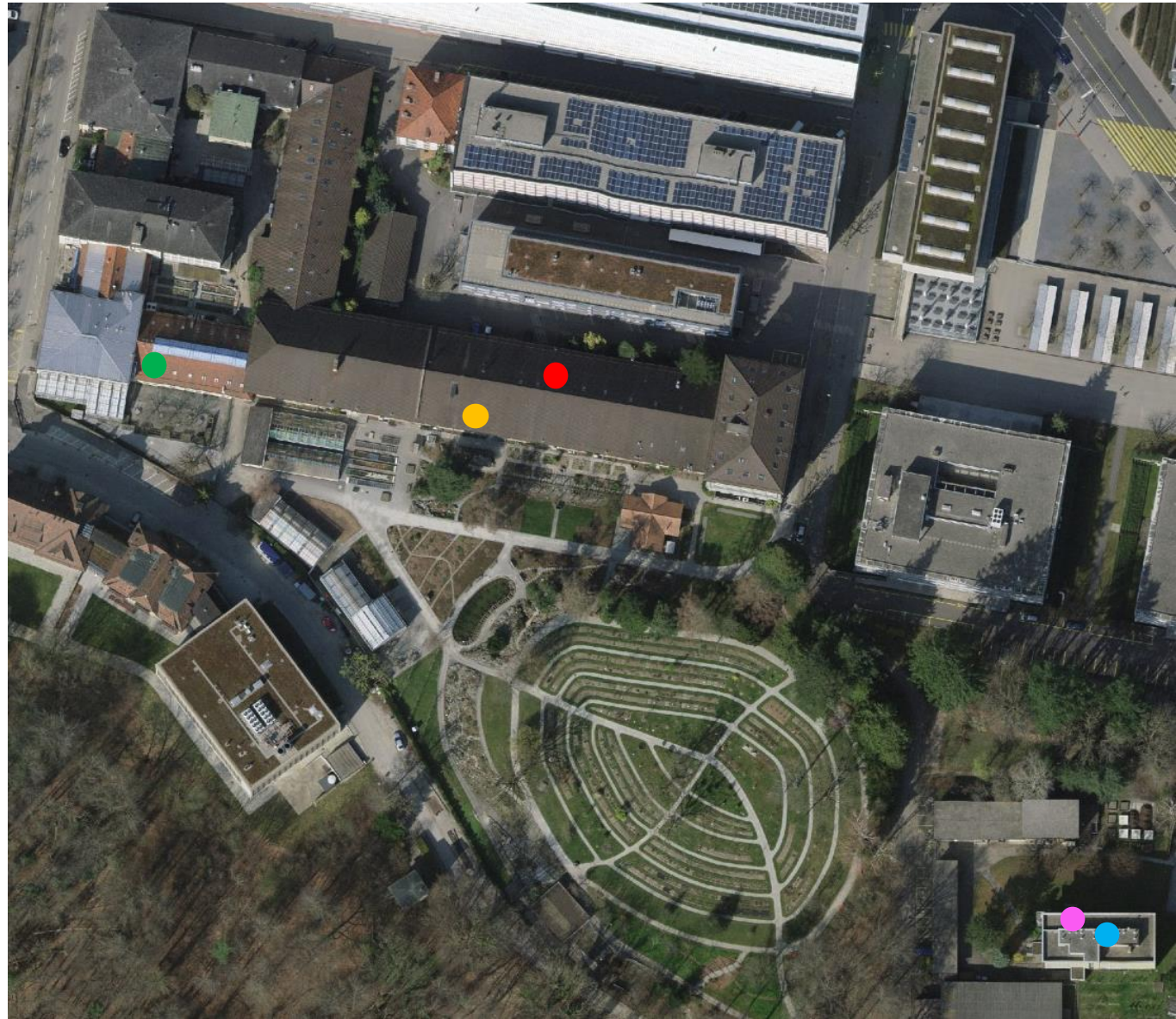
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## GeFri secretary

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## Communication /Events

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**VERY IMPORTANT:** if haven't done this during the welcome event, announce yourself to Mrs Sauge in order to be on the mailing list. Please specify the Master and the option.