



University
of Basel

BIOZENTRUM

The Center for
Molecular Life Sciences

Bachelor &
Master of
Science.

**Your Studies
in Biology**
at the Biozentrum



At the Biozentrum you can study Molecular Biology or Computational Biology. For this, you need a “Matura”, a flair for sciences, curiosity, creativity and perseverance.

What makes studying at the Biozentrum special is that you...

- ... go into the lab already in your second year.
- ... work there on your first research project.
- ... learn to think like scientists at an early stage of your studies.
- ... can participate in the Biozentrum Research Summer.
- ... receive personal support from students in higher semesters.
- ... join an open-minded and international community.
- ... are in close contact with the researchers.
- ... will have a wide range of career prospects with your degree.
- ... can look forward to a great degree program!

Bachelor in Molecular Biology

What do I learn in the Bachelor of Science in Biology, Major in Molecular Biology?

1st year: Undergraduate Studies

You will gain basic knowledge in the subjects:

- Biology
- Chemistry
- Mathematics
- Physics

2nd year: Advanced Level

You will attend lectures in:

- Biochemistry
- Developmental Biology
- Genetics
- Human Physiology
- Immunology
- Molecular Microbiology
- Neurobiology
- Physics of Life
- Structural Biology

And you also participate in a practical course in Experimental Molecular Biology.

3rd year: Advanced Level

You will take part in three six-week block courses:

- Developmental Biology and Neuroscience
- Microbiology and Immunology
- Structural Biology and Biophysics

And you will work on and write an eight-week thesis in Molecular Biology.

Bachelor in Computational Sciences

What do I learn in the Bachelor of Science in Computational Sciences, Major in Computational Biology?

1st year: Undergraduate Studies

You will gain fundamental knowledge in:

- Biology
- Chemistry
- Computer Science
- Mathematics
- Physics

2nd year: Advanced Level

You will attend lectures in:

- Computer Science
- Mathematics
- Molecular Biology

And you also participate in a practical course in Experimental Molecular Biology and one in Bioinformatics.

3rd year: Advanced Level

You take part in the six-week block course

Structural Biology and Biophysics and work on two research projects.



“ In the practical course, you learn the basic skills of lab work such as pipetting or pouring gels. And you get the chance to carry out real experiments for research projects. ”



Master in Molecular Biology

What do I learn in the Master of Science in Molecular Biology?

“ As a Master’s student, you’re part of a research group. You’re becoming more and more independent and can develop your own experiments. ”



The focus is on your own research project. You work in the lab and use new methods and techniques. To deepen your knowledge in your field of specialization, you also attend selected courses.

Specializations to choose from are:

- Biochemistry
- Biophysics
- Cell Biology
- Computational Biology
- Developmental Biology
- Genetics
- Immunology
- Infection Biology
- Microbiology
- Neurobiology
- Structural Biology

At the Biozentrum we investigate how molecules and cells create life, covering the entire spectrum from the atom to the organism. We have 32 research groups and about 500 employees from over 40 nations.

From the atom to the organism – this includes numerous and very different research fields and questions that we tackle:

- » How do proteins form complex machines?
- » How is the genome folded and read?
- » How are cells organized to transport molecules and transmit signals?
- » How do cells become specialized or cancerous?
- » How does the body defend itself against pathogens?
- » How do animals move, sleep and form memories?
- » How do organisms develop and age?
- » What are the theories and computational models that explain biological processes?
- » What might be new strategies to treat diseases such as muscular dystrophies, Alzheimer's or cancer?



At a glance

Bachelor

- » Admission:
Swiss Matura or equivalent qualification
- » Start of studies:
Fall Semester (application deadline 30 April)
- » Duration of studies:
6 semesters
- » Language:
German/English
- » Preparatory Course in Mathematics:
Before starting your studies, you can attend an intensive, one-week preparatory course in mathematics. It helps to refresh your knowledge and to close possible gaps.
www.dmi.unibas.ch/de/vorkurs-mathematik

Master

- » Admission to the Master in Molecular Biology:
 - Bachelor of Science in Biology, Major in Molecular Biology
 - Bachelor of Science in Computational Sciences, Major in Computational Biology
 - or equivalent degree
- » Start of studies:
Spring/Fall Semesters
- » Duration of studies:
3 semesters
- » Language:
English

3 years Bachelor			1,5 years Master		4 years PhD
Bachelor of Science in Computational Sciences	Major in Computational Chemistry Major in Computational Mathematics Major in Computational Methods Major in Computational Physics		MSc in Chemistry MSc in Computer Science MSc in Mathematics MSc in Physics		
	Major in Computational Biology	»»»	Master of Science in Molecular Biology	»»»	PhD
Bachelor of Science in Biology	Major in Molecular Biology	»»»			
	Major in Animal and Plant Sciences		MSc in Animal Biology MSc in Ecology MSc in Epidemiology MSc in Infection Biology MSc in Plant Science		



Student Office Biology

Dr. Julia Locke

Biozentrum, University of Basel

Spitalstrasse 41, 4056 Basel

+41 (0)61 207 22 31

julia.locke@unibas.ch, www.bio.unibas.ch

Student Office Computational Sciences

Dr. Sabine Meinel

University of Basel

Klingelbergstrasse 80, 4056 Basel

+41 (0)61 207 57 29

sabine.meinel@unibas.ch, www.computational.unibas.ch