



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

#### 2<sup>nd</sup> 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.

#### 3<sup>rd</sup> 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

#### 2<sup>nd</sup> year: Advanced Level

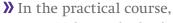
You will attend lectures in:

- 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.



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.

In Cell & Developmental Biology you study the cell, the smallest unit of life, and how it develops from a single cell to a complex organism.

In Infection Biology you research viruses and bacteria and work on strategies to combat infectious diseases.

In **Neurobiology** you study the nervous system and basic processes such as learning, perception and the control of movements.

In Structural Biology & Biophysics you use state-of-the-art technologies to investigate how shape and structure of macromolecules influence their function.

In Computational & Systems Biology you explore the behavior of biological systems with computer-based analyses and simulations.



At a glance			Years		1,5 years		4 years
Bachelor			m		1,5 yea		4
	dmission: wiss Matura or equivalent qualification		try natics s				
	tart of studies: all Semester (application deadline 30 April)	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		
	uration of studies: semesters	utational					
	anguage: erman/English	in Compu	in Comp				
В	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	Science	Major in Major in Major in		M Sc i		
mathe and to		Bachelor of Science in Computational Sciences	Major in Computational Biology	<b>&gt;&gt;&gt;&gt;</b>	nce in logy		
Master			0		Scier ar Bio	<b>&gt;&gt;&gt;&gt;</b>	PhD
-	dmission 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	AB	Major in Molecular Biology	<b>&gt;&gt;&gt;&gt;</b>	Master of Science in Molecular Biology		ā
	tart of studies: pring/Fall Semesters	ence in Biology					
	uration of studies: semesters	Sci	Major in Integrative Biology				
	Language: English	Bachelor of	M Int		ogy gy ology		
		Ba	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

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# Student Office Computational Sciences

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