Molecular Biotechnology Bachelor's Degree Program

Interest in Medical, Molecular Biotechnology

Your strengths lie in biology and chemistry. You are interested in applying medical, molecular biological technologies. With innovative spirit and patience, you like to get to the bottom of things, to develop them further or discover new things. You are a team player, manually skilled and enjoy working in a laboratory.

Analysing Healthy and Sick Cells

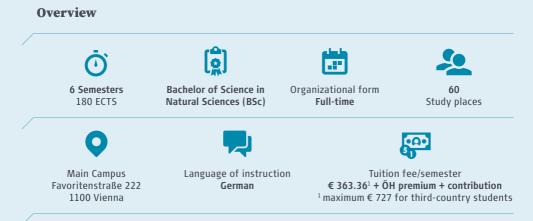
The bachelor's degree program Molecular Biotechnology offers you a practice-oriented education in medical molecular biotechnology. You will learn to analyse the causes of diseases at the cellular level and to develop active substances, vaccines and gene therapies against them. Starting in the winter semester 2022/23, you will be studying in the newly constructed building at the main campus with state-of-the-art lecture rooms and excellently equipped laboratories. The degree program is part of a very extensive national and international network.

Highly Qualified with a Background in Science

As a biotech generalist you are greatly in demand in industry. You can work as a scientific-technical assistant in research departments and laboratories of internationally active pharmaceutical companies as well as at universities or medical institutions. Or you may decide to work in project

management or quality assurance in the manufacture of medicines. At the same time, the degree program serves as preparation for relevant master's studies (inter-) national universities, which can later lead to a doctoral thesis.





Head of Degree Program: Dr. Beatrix Kuen-Krismer



Curriculum

	LECTURE	SCH	ECTS
S	Analytical Chemistry I LE	1	1
E	Analytical Chemistry I LAB	6	6
30	Business Studies LE	1	1
ä	General Biology LE	2	3
1 st SEMESTER 30 ECTS	General Cell Biology LE	1,5	2
M	General Chemistry LE	2	3
s SI	Mathematics for Biology LIC	3	3
-	Microscopy Lab LAB	1,5	3
	Molecular Biology & Genetics I LE	2	3
	Public Law LE	2	2
	Scientific Communication in English IC	2	2
	Social Skills LIC	1	1
TS	Biochemistry I: Foundations &		
Ы	Building Blocks of Life LE	1,5	2
l m	Cell Biology of the Eukaryotes LE	2	3
2 nd SEMESTER 30 ECTS	Cell Culture LE	1	1
EST	Chemical Calculation IC	0,5	0,5
EM	Civil Law LE	2	2
S P	Inorganic Chemistry LE	1	2
2	Mathematics for Biology II IC	2,5	2,5
	Methods of DNA analysis LE	1	2
	Molecular Biology & Genetics II LE	2	3
	Organic Chemistry LE	2	3
	Quantitative Analytical Chemistry LE	1	1
	Quantitative Analytical Chemistry LAB	3	3
	Scientific Communication in English II IC	2	2
	Social Skills II: Self-Coaching & Communication IC	1	1
	Statistics for Biology I IC	2	2
CTS	Biochemistry II: Structure Formation,	1.5	2
0 E	Biorecognition & Catalysis LE Bioinformatics IC	1,5	2
	Cell Culture Laboratory LAB	3	3
3rd SEMESTER 30 ECTS	English in Science & Career LIC	2	2
NES	Fundamentals of Microbiology LE	1,5	2
SEI	Genetic Engineering LAB	3	3
3 rd	Immunology LE	1	2
	Introduction to Molecular Biological	-	2
	Lab Techniques LAB	1	1
	Molecular Biological & Biophysical Methods SE	1,5	3
	Physical Chemistry LE	2	3
	Quality & Process Management LE	2	2
	Social Skills III: Teambuilding & Conflict Resolution	C 1	1
	Statistics for Biology II IC	2	2
	Virology LE	0,5	1

	LECTURE	SCH	ECTS
^	Applied Microbiology LE	2	2,5
30 EC I S	Biochemistry III: Bioenergetics and Metabolism LE	1,5	2
20	English in Science & Career II IC	2	2
Ě	Gene Expression LE	1	2
4" SEMESTER	Genome Organization IC	1	2
Ā	GxP LE	4	5
7	Instrument-based Analytics LE	2	3
2	Microbiological Lab Techniques LAB	2,5	2,5
	Project Management IC	2	2
	Protein & Enzyme Biochemistry LAB	3	3
	Protein Expression & Purification LAB	3	3
	Social Skills IV: Moderation & Problem Solving IC	1	1

^	Bachelor Thesis I & Scientific Method SE	5
2	Industry Practical PR	25

5th SEM | 30

TS	Applied Genomics LE	2	3
6 th SEMESTER 30 ECTS	Bachelor Exam		2
	Clinical aspects of immunology LE	1	2
	Developmental Biology LE	2	3
	Ethics IC	1	1
	Histology LE	2	3
	Human Physiology LE	2	3
	Intercultural Competence IC	1	1
	Marketing & Product Lifecycle Management IC	2	2
	Model Organisms LE	1	2
	Organic Chemistry LAB	3	3
	Reflection of Internship SE	2	2
	Tissue Engineering LE	2	3

Abbreviations

More information:

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