

Bioengineering | Bachelor's Degree Program

Biology And Technology

You are interested in science, and mathematics is one of your strengths. Biology and technology fascinate you, which is why you want to learn how they can be optimally applied in industrial practice. You think analytically and in a process-oriented manner. Quality is important to you. You like to work in teams and on projects, you want to make a career in industry and have an adequate knowledge of English.

21st Century Key Technology

In the bachelor's degree program in Bioengineering you will be trained to conceptualize biotechnological plants and to plan and optimize production processes. Technology, biology and chemistry are the pillars of this program. It is tailored to applications in the medical-pharmaceutical industry, the chemical industry and to brewing and fermentation technology. 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.

Booming Biotech Industry

As a biotechnologist you plan, develop and optimize biotechnological production processes, to make them suitable for industrial production. You can work in the biopharmaceutical, chemical or food industry, or in brewing and fermentation technology, among others. In the medium-term, you could hold a management position or at some point found your own start-up.

Overview



6 Semester
180 ECTS



**Bachelor of Science
in Engineering (BSc)**



Organizational form
Part-time



40
Study places



Main Campus
1100 Vienna, as of winter
semester 2022/23



Language of instruction
German



Tuition fee/semester
€ 363.36¹ + ÖH premium + contribution
¹ maximum € 727 for third-country students

Head of Degree Program: Dr. Michael Maurer

Curriculum

	LECTURE	SCH	ECTS
1 st SEMESTER 30 ECTS	Analytical and physical Chemistry LE	2	3
	General and inorganic Chemistry LE	2,5	5
	General Chemistry I (practical Course) LAB	1	1
	General Microbiology LE	2	4
	Introduction to organic Chemistry LE	1	2
	Mathematics LE	2	4
	Microbiological Microscopy (practical Course) LAB	0,5	1
	Physics LE	1,5	3
	Statistics for chemical Analysis LE+EX	1,5	3
	Stoichiometry and quantitative chemical Analysis LE	1,5	2
Tutorial in Mathematics EX	1	2	
2 nd SEMESTER 30 ECTS	Bioorganic Chemistry LE	1	3
	General Chemistry II (practical Course) LAB	2	2
	General Chemistry III (practical Course) LAB	3	4
	Hydraulics and fluid Mechanics LE	1	2
	Mechanical Engineering I LE	2	5
	Microbiologic Methods LE+EX	0,5	1
	Organic Chemistry LE	2	4
	Specific Microbiology LE	2	4
3 rd SEMESTER 30 ECTS	Biochemistry LE	2	4
	Calculations in Process Engineering LE+EX	2	5
	Electrical Engineering LE	1,5	3
	General Microbiology (practical course) LAB	3	3
	Introduction to the biochemical Exercises LE+EX	0,5	1
	Mechanical Engineering II LE	2	4
	Molecular Genetics and Straindevelopment LE	2	4
	Thermo-mechanical Process Engineering LE	2	4
4 th SEMESTER 30 ECTS	Tutorial for Calculations in Process Engineering EX	0,5	2
	Basics of Bioprocess Engineering LE	2	4
	Bioanalytics LE	2	3
	Biochemistry (practical Course) LAB	2,5	3
	Brewing and Fermentation Technology LE	2	4
	Calculations in Bioprocess Engineering LE+EX	1	2
	Cell Biology LE	2	4
	Measurement, Control -and Sensor Technology LE+EX	1,5	3,5
Programming and Bioinformatics LE+EX	1	3,5	
Technical Microbiology LE	2	3	

	LECTURE	SCH	ECTS	
5 th SEMESTER 30 ECTS	Animal Cell Technology LE	1	2	
	Applied Statistics LE	1	2	
	Introduction to GMP and Quality Management LE	1	2	
	Molecular Genetics (practical Course) LAB	2	3	
	Molecular Genetics (practical Course) - Project Preparation SE	1	1	
	Practical Course: Fermentation Technology LAB	3,5	5	
	Quality Control LE	1	2	
	Statistics (practical Course) EX	1	4	
	Specialization Bioprocess Technology			
	Biotechnological Plant Engineering and Automation LE	2	5	
6 th SEMESTER 30 ECTS	GMP (practical Course) SE	1	4	
	Specialization Informatics			
	Bioinformatic Data Analysis (Statistics) EX	1	2	
	Bioinformatics LE	0,5	1	
	Programming LE+EX	1,5	6	
	Aseptic Filling LE	0,5	1	
	Downstream-Processing, Metabolites LE	1	2	
	Downstream-Processing, Proteins LE	1	2	
	Fermentation (Practical Course) LAB	1,5	2	
	Plant Hygiene LE	1	2	
Practical Training PR		7,5		
Practical Training - Reflection SE	0,5	0,5		
Specialization Bioprocess Technology				
Bachelor Thesis - Supervision - BVT LE+EX	2	2		
Downstream Processing (Practical Course) LAB	1	1		
Facility Design, GMP-Project, Bachelor Thesis SE	5	10		
Specialization Informatics				
Bachelor Thesis - Supervision - BVT LE+EX	2	2		
Linuxbased Systems and Data Base LE+EX	1	1		
Programme Design, Automation, Bachelor Thesis SE	5	10		

Abbreviations

ECTS	ECTS Credits
EX	Exercise
LAB	Laboratory
LE	Lecture
PR	Practical
SCH	Semester Credit Hours
SE	Seminar

More information: www.fh-campuswien.ac.at/bioe_b-en

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