

# Course of Study Bioprocess Engineering (Study Cohort w20)

Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Compulsory	Thesis Compulsory
Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

Sample course plan A Bachelor Bioprocess Engineering (BVTBS)

1	<b>Engineering Mechanics I</b>		<b>Engineering Mechanics II</b>		<b>Basics of Electrical Engineering</b>		<b>Fundamentals of Fluid Mechanics</b>		<b>Heat and Mass Transfer</b>		<b>Process and Plant Engineering I</b>	
2	Engineering Mechanics I	VL 3	Engineering Mechanics II	VL 3	Basics of Electrical Engineering	VL 3	Fundamentals of Fluid Mechanics	VL 2	Heat and Mass Transfer	VL 2	Process and Plant Engineering I	VL 2
3	Engineering Mechanics I	GÜ 2	Engineering Mechanics II	GÜ 2	Basics of Electrical Engineering	GÜ 2	Fluid Mechanics for Process Engineering	HÜ 2	Heat and Mass Transfer	GÜ 1	Process and Plant Engineering I	HÜ 1
4									Heat and Mass Transfer	HÜ 1	Process and Plant Engineering I	GÜ 1
5												
6												
7	<b>Mathematics I</b>		<b>Technical Thermodynamics I</b>		<b>Technical Thermodynamics II</b>		<b>Phase Equilibria Thermodynamics</b>		<b>Thermal Separation Processes</b>		<b>Particle Technology and Solids Process Engineering</b>	
8	Linear Algebra I	VL 2	Technical Thermodynamics I	VL 2	Technical Thermodynamics II	VL 2	Phase Equilibria Thermodynamics	VL 2	Thermal Separation Processes	VL 2	Particle Technology I	VL 2
9	Linear Algebra I	GÜ 1	Technical Thermodynamics I	HÜ 1	Technical Thermodynamics II	HÜ 1	Phase Equilibria Thermodynamics	GÜ 1	Thermal Separation Processes	GÜ 2	Particle Technology I	GÜ 1
10	Linear Algebra I	HÜ 1	Technical Thermodynamics I	GÜ 1	Technical Thermodynamics II	GÜ 1	Phase Equilibria Thermodynamics	HÜ 1	Thermal Separation Processes	HÜ 1	Particle Technology I	PR 2
11	Analysis I	VL 2							Separation Processes	PR 1		
12	Analysis I	GÜ 1										
13	Analysis I	HÜ 1										
14			<b>Biochemistry and Microbiology</b>		<b>Mathematics III</b>		<b>Foundations of Management</b>		<b>Introduction to Control Systems</b>		<b>Fundamentals of Technical Drawing</b>	
15			Biochemistry	VL 2	Analysis III	VL 2	Introduction to Management	VL 3	Introduction to Control Systems	VL 2	Fundamentals of Technical Drawing	VL 1
16	<b>General and Inorganic Chemistry</b>		Biochemistry	PBL 1	Analysis III	GÜ 1	Management Tutorial	GÜ 2	Introduction to Control Systems	GÜ 2	Fundamentals of Technical Drawing	HÜ 1
17	General and Inorganic Chemistry	VL 3	Microbiology	VL 2	Analysis III	HÜ 1						
18	Fundamentals in Inorganic Chemistry	PR 3	Microbiology	PBL 1	Differential Equations 1	VL 2						
19	Fundamentals in Inorganic Chemistry	GÜ 1			Differential Equations 1	GÜ 1						
20					Differential Equations 1	HÜ 1						
21			<b>Mathematics II</b>				<b>Bioprocess Engineering - Fundamentals</b>		<b>Bioprocess Engineering - Advanced</b>			
22	<b>Fundamentals of Process Engineering and Material Engineering</b>		Linear Algebra II	VL 2			Bioprocess Engineering - Fundamentals	VL 2	Bioprocess Engineering - Advanced	VL 2		
23	Introduction into Process Engineering/Bioprocess Engineering	VL 2	Linear Algebra II	GÜ 1	<b>Fundamentals in Molecular Biology</b>		Bioprocess Engineering - Fundamentals	HÜ 2	Bioprocess Engineering - Advanced	GÜ 2		
24	Fundamentals of material engineering	VL 2	Linear Algebra II	HÜ 1	Genetics and Molecular Biology	VL 2	Bioprocess Engineering - Fundamental Practical Course	PR 2				
25			Analysis II	VL 2	Genetics and Molecular Biology	PBL 1						
26	<b>Measurement Technology for VT/ BVT</b>		Analysis II	HÜ 1	Lab Course in Microbiology and Biochemistry	PR 3						
27	Measurement Technology	VL 2	Analysis II	GÜ 1								
28	Physical Fundamentals of Measurement Technology	VL 2					<b>Computer Science for Engineers - Programming Concepts, Data Handling &amp; Communication</b>					
29	Practical Course Measurement Technology	PR 2	<b>Organic Chemistry</b>		<b>Chemical Reaction Engineering (part 1)</b>		Computer Science for Engineers - Programming Concepts, Data Handling & Communication	VL 3				
30			Organic Chemistry	VL 4	Chemical Reaction Engineering	VL 2	Computer Science for Engineers - Programming Concepts, Data Handling & Communication	GÜ 2				
31			Organic Chemistry	PR 3	Chemical Reaction Engineering	HÜ 2						
32							<b>Chemical Reaction Engineering (part 2)</b>					
							Experimental Course Chemical Engineering	PR 2				

Non-technical Courses for Bachelors (from catalogue) - 6LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.

