

Course of Study Bioprocess Engineering (Study Cohort w19)

Sample course plan D Bachelor Bioprocess Engineering (BVTBS)

Legend:			
Core qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

LP	Semester 1	FormHrs/wk	Semester 2	FormHrs/wk	Semester 3	FormHrs/wk	Semester 4	FormHrs/wk	Semester 5	FormHrs/wk	Semester 6	FormHrs/wk
1	Engineering Mechanics I		Engineering Mechanics II		Basics of Electrical Engineering		Fundamentals of Fluid Mechanics		Heat and Mass Transfer		Process and Plant Engineering I	
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	UE 2	Engineering Mechanics II	UE 2	Basics of Electrical Engineering	UE 2	Fluid Mechanics for Process Engineering	HÜ 2	Heat and Mass Transfer	UE 1	Process and Plant Engineering I	HÜ 1
4									Heat and Mass Transfer	HÜ 1	Process and Plant Engineering I	UE 1
5											Process and Plant Engineering I	UE 1
6												
7	Mathematics I		Technical Thermodynamics I		Technical Thermodynamics II		Phase Equilibria Thermodynamics		Thermal Separation Processes		Particle Technology and Solids Process Engineering	
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	UE 1	Technical Thermodynamics I	HÜ 1	Technical Thermodynamics II	HÜ 1	Phase Equilibria Thermodynamics	UE 1	Thermal Separation Processes	UE 2	Particle Technology I	UE 1
10	Linear Algebra I	HÜ 1	Technical Thermodynamics I	UE 1	Technical Thermodynamics II	HÜ 1	Phase Equilibria Thermodynamics	HÜ 1	Thermal Separation Processes	HÜ 1	Particle Technology I	PR 2
11	Analysis I	VL 2			Technical Thermodynamics II	UE 1	Phase Equilibria Thermodynamics	HÜ 1	Thermal Separation Processes	HÜ 1		
12	Analysis I	UE 1							Separation Processes	PR 1		
13			Biochemistry and Microbiology		Mathematics III		Foundations of Management		Introduction to Control Systems		Environmental Technology (part 2)	
			Biochemistry	VL 2	Analysis III	VL 2	Introduction to Management	VL 3	Introduction to Control Systems	VL 2	Practical Exercise	PR 1
			Biochemistry	PBL 1	Analysis III	UE 1	Management Tutorial	HÜ 2	Introduction to Control Systems	UE 2	Environmental Technology	
			Microbiology	VL 2	Analysis III	HÜ 1						
14			Microbiology	PBL 1	Differential Equations 1	VL 2						
15	General and Inorganic Chemistry				Differential Equations 1	UE 1						
16	General and Inorganic Chemistry	VL 3			Differential Equations 1	HÜ 1						
17	Fundamentals in Inorganic Chemistry	PR 3										
18	Fundamentals in Inorganic Chemistry	UE 1	Mathematics II				Informatics for Process Engineers		Bioprocess Engineering - Advanced			
19	Fundamentals in Inorganic Chemistry	UE 1	Linear Algebra II	VL 2			Numeric and Matlab	PR 2	Bioprocess Engineering - Advanced	VL 2		
20			Linear Algebra II	UE 1			Informatics for Process Engineers	VL 2	Bioprocess Engineering - Advanced	UE 2		
21	Fundamentals of Process Engineering and Material Engineering		Linear Algebra II	HÜ 1	Fundamentals in Molecular Biology		Informatics for Process Engineers	UE 2				
22	Introduction into Process Engineering/Bioprocess Engineering	VL 2	Analysis II	VL 2	Genetics and Molecular Biology	VL 2						
23	Fundamentals of material engineering	VL 2	Analysis II	HÜ 1	Genetics and Molecular Biology	PBL 1						
			Analysis II	UE 1	Lab Course in Microbiology and Biochemistry	PR 3						
24	Measurement Technology for VT/BVT						Bioprocess Engineering - Fundamentals		Environmental Technology (part 1)			
25	Measurement Technology	VL 2					Bioprocess Engineering -	VL 2	Environmental Technologie	VL 2		
26	Physical Fundamentals of	VL 2										
27	Measurement Technology		Organic Chemistry		Chemical Reaction Engineering		Fundamentals					

28	Practical Course	PR 2	Organic Chemistry	VL 4	Chemical Reaction Engineering (part 1)	Bioprocess Engineering- Fundamentals	HÜ 2
29	Measurement Technology			PR 3		Chemical Reaction Engineering	VL 2
30					Chemical Reaction Engineering	HÜ 2	
31							
32						Chemical Reaction Engineering (part 2)	
						Experimental Course	PR 2
						Chemical Engineering	

Nontechnical Complementary 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.