

Course of Study Bioprocess Engineering (Study Cohort w24)

Sample course plan A Master Bioprocess Engineering (BVTMS)

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

Specialisation A - General Bioprocess Engineering

Year	Course	Mode	Credits	Course	Mode	Credits	Course	Mode	Credits	Notes
1	Transport Processes			Advanced Chemical Reaction Engineering			Process Design Project			Master Thesis
2	Heat & Mass Transfer in Process Engineering	VL	2	Chemical Reaction Engineering	VL	2	Process Design Project	PK	6	
3	Multiphase Flows	VL	2	Chemical Reaction Engineering	HÜ	2				
3	Reactor design under consideration of local transport processes	PBL	2	Experimental Course Chemical Engineering	PR	2				
4										
5										
6										
7	Separation Technologies for Life Sciences			Bioprocess and Biosystems Engineering			Bioprocess Engineering Advanced Practical Course			
8	Chromatographic Separation Processes	VL	2	Bioreactor Design and Operation	VL	2	Advanced Practical Course in Microbiology	PR	3	
9	Unit Operations for Bio-Related Systems	VL	2	Biosystems Engineering	VL	2	Bioprocess Engineering Advanced Practical Course	PR	3	
9	Unit Operations for Bio-Related Systems	PBL	2	Bioreactors and Biosystems Engineering	PBL	1				
10										
11										
12										
13	Biocatalysis			Technical Microbiology			Cell and Tissue Engineering			
14	Technical Biocatalysis	VL	2	Applied Molecular Biology	VL	2	Fundamentals of Cell and Tissue Engineering	VL	2	
15	Biocatalysis and Enzyme Technology	VL	2	Technical Microbiology	VL	2	Bioprocess Engineering for Medical Applications	VL	2	
16				Technical Microbiology	HÜ	1				
17										
18										
19	Process modeling and control			Industrial Bioprocess Engineering			Synthesis and Design of Industrial Processes			
20	Process modeling and control	VL	2	Biotechnical Processes	PBL	2	Synthesis and Design of Industrial Facilities	VL	1	
21	Process modeling and control	GÜ	3	Development of bioprocess engineering processes in industrial practice	SE	2	Industrial Plant Design and Economics	PBL	3	
22										
23										
24										
25							Study work Bioprocess Engineering			
26							Study Work Bioprocess Engineering	PR	6	
27										
28										
29										
30										
Business & Management (from catalogue) - 6LP										
Non-technical Courses for Master (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.

