Course of Study Bioprocess Engineering (Study Cohort w24)

Sample course plan A Master Bioprocess Engineering (BVTMS) Dual study program

Specialisation A - General Bioprocess Engineering

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

LP			
1	**Transport Processes**	**Advanced Chemical Reaction Engineering**	**Process Design Project**	**Master thesis (dual study program)**
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		
4	Reactor design under consideration of local transport processes PBL 2	Experimental Course Chemical Engineering PR 2		
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	
10	Unit Operations for Bio-Related Systems PBL 2	Bioreactors and Biosystems Engineering PBL 1		
11				
12				
13	**Biocatalysis**	**Technical Microbiology**	**Practical module 3 (dual study program, Master's degree)**	
14	Technical Biocatalysis VL 2	Applied Molecular Biology VL 2	Practical term 3 0	
15	Biocatalysis and Enzyme Technology VL 2	Technical Microbiology VL 2		
16		Technical Microbiology HÜ 1		
17				
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19	**Practical module 1 (dual study program, Master's degree)**	**Practical module 2 (dual study program, Master's degree)**		
20	Practical term 1 0	Practical term 2 0		
21				
22				
23			**Cell and Tissue Engineering**	
24			Fundamentals of Cell and Tissue Engineering VL 2	
25			Bioprocess Engineering for Medical Applications VL 2	
26				
27				
28				
29	**Process modeling and control**	**Industrial Bioprocess Engineering**	**Synthesis and Design of Industrial Processes**	
30	Process modeling and control VL 2	Biotechnical Processes PBL 2	Synthesis and Design of Industrial Facilities VL 1	
31	Process modeling and control GÜ 3	Development of bioprocess engineering processes in industrial practice SE 2	Industrial Plant Design and Economics PBL 3	
32				
33				
34				
35			**Study work Bioprocess Engineering**	
36			Study Work Bioprocess Engineering PR 6	
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Business & Management (from catalogue) - 6LP

Linking theory and practice (dual study program, Master's degree) (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.