Course of Study Bioprocess Engineering (Study Cohort w20)

Sample course plan A Master Bioprocess Engineering (BVTMS)

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**			**Dimensioning and Assessment of Renewable Energy Systems (part 2)**		
2	Heat & Mass Transfer in Process Engineering	VL	2	Chemical Reaction Engineering	VL	2	Process Design Project	PK	6	Heat Provision from Renewable Sources of Energy	SE	2
3	Multiphase Flows	VL	2	Chemical Reaction Engineering	HÜ	2						
4	Reactor Design Using Local Transport Processes	PBL	2	Experimental Course Chemical Engineering	PR	2				**Master Thesis**		
5												
6												
7	**Process and Plant Engineering II**			**Bioprocess and Biosystems Engineering**			**Bioprocess Engineering Advanced Practical Course**					
8	Process and Plant Engineering II	VL	2	Bioreactor Design and Operation	VL	2	Advanced Practical Course in Microbiology	PR	3			
9	Process and Plant Engineering II	HÜ	1	Biosystems Engineering	VL	2	Bioprocess Engineering Advanced Practical Course	PR	3			
10	Process and Plant Engineering II	GÜ	1	Bioreactors and Biosystems Engineering	PBL	1						
11												
12												
13	**Separation Technologies for Life Sciences**			**Technical Microbiology**			**Particle Technology and Solid Matter Process Technology**					
14	Chromatographic Separation Processes	VL	2	Applied Molecular Biology	VL	2	Advanced Particle Technology II	VL	2			
15	Unit Operations for Bio-Related Systems	VL	2	Technical Microbiology	VL	2	Advanced Particle Technology II	PBL	1			
16	Unit Operations for Bio-Related Systems	PBL	2	Technical Microbiology	HÜ	1	Experimental Course Particle Technology	PR	3			
17												
18												
19	**Biocatalysis**			**Cell and Tissue Engineering**			**Study work Bioprocess Engineering**					
20	Technical Biocatalysis	VL	2	Fundamentals of Cell and Tissue Engineering	VL	2	Study Work Bioprocess Engineering	PR	6			
21	Biocatalysis and Enzyme Technology	VL	2	Bioprocess Engineering for Medical Applications	VL	2						
22												
23												
24												
25							**Dimensioning and Assessment of Renewable Energy Systems (part 1)**					
26							Electricity Generation from Renewable Sources of Energy	SE	2			
27							Environmental Technology and Energy Economics	PBL	2			
28												
29												
30												
31												
32												
	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.