Course of Study Chemical and Bioprocess Engineering (Study Cohort w17)

Sample course plan A Master Chemical and Bioprocess Engineering (IMPCBE)
Specialisation Chemical Process Engineering

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	Form	Hrs/wk	Semester 2	Form	Hrs/wk	Semester 3	Form	Hrs/wk	Semester 4	Form	Hrs/wk
1	**Applied Thermodynamics: Thermodynamic Properties for Industrial Applications**			**Bioprocess and Biosystems Engineering**			**Process Design Project**			**Master Thesis**		
2	Applied Thermodynamics: Thermodynamic Properties for Industrial Applications	VL	4	Bioreactor Design and Operation	VL	2	Process Design Project	PK	6			
3				Bioreactor Design and Operation	PR	1						
4				Biosystems Engineering	VL	2						
5	Applied Thermodynamics: Thermodynamic Properties for Industrial Applications	UE	2									
6				Biosystems Engineering	PBL	1						
7	**Separation Technologies for Life Sciences**			**Heterogeneous Catalysis**			**Research project IMP Chemical and Bioprocess Engineering**					
8	Chromatographic Separation Processes	VL	2	Analysis and Design of Heterogeneous Catalytic Reactors	VL	2	Research Project IMP Chemical and Bioprocess Engineering	PBL	6			
9	Unit Operations for Bio-Related Systems	VL	2									
10				Modern Methods in Heterogeneous Catalysis	VL	2						
11	Unit Operations for Bio-Related Systems	PBL	2									
12				Modern Methods in Heterogeneous Catalysis	PR	2						
13	**Biocatalysis**			**Technical Microbiology**			**Industrial Process Automation**					
14	Technical Biocatalysis	VL	2	Applied Molecular Biology	VL	2	Industrial Process Automation	VL	2			
15	Biocatalysis and Enzyme Technology	VL	2	Technical Microbiology	VL	2	Industrial Process Automation	UE	2			
16												
17				Technical Microbiology	HÜ	1						
18												
19	**Process Systems Engineering and Transport Processes**			**High Pressure Chemical Engineering**			**Membrane Technology**					
20												
21	Heat & Mass Transfer in Process Engineering	VL	2	Advanced Separation Processes	VL	2	Membrane Technology	VL	2			
22				Industrial Processes Under High Pressure	VL	2	Membrane Technology	UE	1			
23	Multiphase Flows	VL	2									
24	Process Systems Engineering	VL	2	High Pressure Technique for Apparatus Engineering	VL	2	Membrane Technology	PR	1			
25	**Particle Technology for International Master Programs**											
26												
27	Particle Technology for IMP	VL	2									
28												
29	Practicle Course Particle Technology for IMP	PR	3									
30												
	Business & Management (from catalogue) - 6LP											
	Nontechnical Elective Complementary 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.