

# Course of Study Chemical and Bioprocess Engineering (Study Cohort w20)

Sample course plan B Master Chemical and Bioprocess Engineering (IMPCBE)

		Semester 2		Semester 3		Semester 4					
	Form	Hrs/wk	Form	Hrs/wk	Form	Hrs/wk	Form	Hrs/wk			
1	<b>Applied Thermodynamics: Thermodynamic Properties for Industrial Applications</b>		<b>Bioprocess and Biosystems Engineering</b>		<b>Process Design Project</b>		<b>Master Thesis</b>				
2	Applied Thermodynamics: Thermodynamic Properties for Industrial Applications	VL	4	Bioreactor Design and Operation	VL	2			Process Design Project	PK	6
3	Applied Thermodynamics: Thermodynamic Properties for Industrial Applications	UE	2	Biosystems Engineering	VL	2					
4				Bioreactors and Biosystems Engineering	PBL	1					
5											
6											
7	<b>Separation Technologies for Life Sciences</b>		<b>Heterogeneous Catalysis</b>		<b>Research project IMP Chemical and Bioprocess Engineering</b>						
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	Modern Methods in Heterogeneous Catalysis	VL	2					
10	Unit Operations for Bio-Related Systems	PBL	2	Modern Methods in Heterogeneous Catalysis	PR	2					
11											
12											
13	<b>Biocatalysis</b>		<b>Technical Microbiology</b>		<b>Industrial Bioprocess Engineering</b>						
14	Technical Biocatalysis	VL	2	Applied Molecular Biology	VL	2			Biotechnical Processes	PBL	2
15	Biocatalysis and Enzyme Technology	VL	2	Technical Microbiology	VL	2			Development of bioprocess engineering processes in industrial practice	SE	2
16				Technical Microbiology	HÜ	1					
17											
18											
19	<b>Process Systems Engineering and Transport Processes</b>		<b>Cell and Tissue Engineering</b>		<b>Bioresources and Biorefineries</b>						
20	Heat & Mass Transfer in Process Engineering	VL	2	Fundamentals of Cell and Tissue Engineering	VL	2			Bioresource Management	VL	2
21	Multiphase Flows	VL	2	Bioprocess Engineering for Medical Applications	VL	2			Bioresource Management	UE	1
22	Process Systems Engineering	VL	2						Biorefinery Technology	VL	2
23									Biorefinery Technologie	UE	1
24											
25	<b>Particle Technology for International Master Programs</b>										
26	Particle Technology for IMP	VL	2								
27	Practicle Course Particle Technology for IMP	PR	3								
28	Excercise Particle Technology for International Master Program	HÜ	1								
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.

