Course of Study Chemical and Bioprocess Engineering (Study Cohort w24)

Sample course plan B Bachelor Chemical and Bioprocess Engineering (CBBS) Dual study program

Specialisation Bio Engineering

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

LP						
1	**Mathematics I** Mathematics I VL 4 Mathematics I HÜ 2 Mathematics I GÜ 2	**Technical Thermodynamics I** Technical Thermodynamics I VL 2 Technical Thermodynamics I HÜ 1 Technical Thermodynamics I GÜ 1	**Technical Thermodynamics II** Technical Thermodynamics II VL 2 Technical Thermodynamics II HÜ 1 Technical Thermodynamics II GÜ 1	**Fundamentals of Fluid Mechanics** Fundamentals of Fluid Mechanics VL 2 Fluid Mechanics for Process Engineering HÜ 2 Fundamentals on Fluid Mechanics GÜ 2	**Heat and Mass Transfer** Heat and Mass Transfer VL 2 Heat and Mass Transfer GÜ 2 Heat and Mass Transfer HÜ 1	**Particle Technology and Solids Process Engineering** Particle Technology I VL 2 Particle Technology I GÜ 1 Particle Technology I PR 2
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7		**Mathematics II** Mathematics II VL 4 Mathematics II HÜ 2 Mathematics II GÜ 2	**Mathematics III** Analysis III VL 2 Analysis III GÜ 1 Analysis III HÜ 1 Differential Equations 1 VL 2 Differential Equations 1 GÜ 1 Differential Equations 1 HÜ 1	**Phase Equilibria Thermodynamics** Phase Equilibria Thermodynamics VL 2 Phase Equilibria Thermodynamics GÜ 1 Phase Equilibria Thermodynamics HÜ 1	**Thermal Separation Processes** Thermal Separation Processes VL 2 Thermal Separation Processes GÜ 2 Thermal Separation Processes HÜ 1 Separation Processes PR 1	**Conceptual Process Design** Conceptual Process Design VL 2 Conceptual Process Design HÜ 2 Conceptual Process Design GÜ 1
8						
9	**General and Inorganic Chemistry** General and Inorganic Chemistry VL 3 Fundamentals in Inorganic Chemistry PR 3 Fundamentals in Inorganic Chemistry GÜ 1					
10						
11						
12						
13				**Computer Science for Engineers - Programming Concepts, Data Handling & Communication** Computer Science for Engineers - Programming Concepts, Data Handling & Communication VL 3 Computer Science for Engineers - Programming Concepts, Data Handling & Communication GÜ 2	**Introduction to Control Systems** Introduction to Control Systems VL 2 Introduction to Control Systems GÜ 2	**Bioinformatics** Bioinformatics SE 2
14						
15	**Practical module 1 (dual study program, Bachelor's degree)** Practical term 1 0	**Organic Chemistry** Organic Chemistry VL 2 Organic Chemistry PR 2 Organic Chemistry GÜ 2	**Chemical Reaction Engineering (part 1)** Chemical Reaction Engineering VL 2 Chemical Reaction Engineering HÜ 2			**Bachelor thesis (dual study program)**
16						
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19			**Measurement Technology for Chemical and Bioprocess Engineering** Measurement Technology VL 2 Physical Fundamentals of Measurement Technology VL 2 Practical Course Measurement Technology PR 2	**Practical module 4 (dual study program, Bachelor's degree)** Practical term 4 0	**Practical module 5 (dual study program, Bachelor's degree)** Practical term 5 0	
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21	**Introduction to Chemical and Bioengineering** Introduction to Chemical and Bioengineering VL 2	**Fundamentals of Technical Drawing** Fundamentals of Technical Drawing VL 1 Fundamentals of Technical Drawing HÜ 1				
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24	**Biological and Biochemical Fundamentals (part 1)** Biological and Biochemical Fundamentals VL 2	**Practical module 2 (dual study program, Bachelor's degree)** Practical term 2 0				
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26	**Engineering Mechanics I (Stereostatics)** Engineering Mechanics I VL 2 Engineering Mechanics I GÜ 2 Engineering Mechanics I HÜ 2		**Practical module 3 (dual study program, Bachelor's degree)** Practical term 3 0	**Chemical Reaction Engineering (part 2)** Experimental Course Chemical Engineering PR 2	**Economic and environmental project assessment** Basics of Environmental Project Assessment VL 2 Case studies economic and environmental project assessment GÜ 1 Basics of economic project assement VL 2	
27				**Fundamentals in Molecular Biology** Genetics and Molecular Biology VL 2 Genetics and Molecular Biology PBL 1 Molecular Biology Lab Course PR 3		
28						
29						
30		**Engineering Mechanics II (Elastostatics)** Engineering Mechanics II VL 2 Engineering Mechanics II GÜ 2 Engineering Mechanics II HÜ 2				
31			**Bioprocess Technology I** Bioprocess Technology I VL 2 Bioprocess Technology I HÜ 2 Bioprocess Technology I - Fundamental Practical Course PR 2		**Bioprocess Technology II** Bioprocess Technology II VL 2 Bioprocess Technology II GÜ 2	
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36		**Biological and Biochemical Fundamentals (part 2)** Fundamental Biological and Biochemical Practical Course PR 3 Introduction to the Biological and Biochemical Practical Course VL 1				
37					**Advanced Practical Course in Bioengineering** Advanced Practical Course in Bioengineering PR 2	
38						
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Linking theory and practice (dual study program, Bachelor'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.