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

Core Qualification Elective Compulsory Specialisation Elective Compulsory Focus Elective Compulsory

Interdisciplinary complement

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

Specialisation Bio Engineering 1 Mathematics I Technical Thermodynamics I Technical Thermodynamics II Fundamentals of Fluid Mechanics Heat and Mass Transfer Particle Technology and Solids Process Engineering Mathematics I VL 4 Technical Thermodynamics I VL 2 Technical Thermodynamics II VL 2 Fundamentals of Fluid Mechanics VL 2 Heat and Mass Transfer VL 2 Particle Technology I VL 2 2 Mathematics I HŪ 2 Technical Thermodynamics I HÜ 1 Technical Thermodynamics II HÜ 1 Fluid Mechanics for Process Engineering HŪ 2 Heat and Mass Transfer GÜ 2 Particle Technology I GÜ 1 З Mathematics I GÜ 2 Technical Thermodynamics I GÜ 1 Technical Thermodynamics II GÜ 1 Fundamentals on Fluid Mechanics GÜ 2 Heat and Mass Transfer HÜ 1 Particle Technology I PR 2 4 5 6 7 Mathematics II Mathematics III Phase Equilibria Thermodynamics Thermal Separation Processes Conceptual Process Design Mathematics II VI 4 Analysis III VI 2 Phase Equilibria Thermodynamics VI 2 Thermal Separation Processes VI 2 Conceptual Process Design VI 2 8 Mathematics II HÜ 2 Analysis III GŪ 1 Phase Equilibria Thermodynamics GÜ 1 Thermal Separation Processes GÜ 2 Conceptual Process Design HÜ 2 a General and Inorganic Chemistry ый <u>1</u> HŬ 1 GÜ 1 Mathematics II GÜ 2 Analysis III Phase Equilibria Thermodynamics ый **1** Thermal Separation Processes Concentual Process Design General and Inorganic Chemistry 1/1 3 PR 1 VI 2 10 Differential Equations 1 Separation Processes PR 3 Fundamentals in Inorganic Chemistry Differential Equations 1 GÜ 1 11 Fundamentals in Inorganic Chemistry GÜ 1 Differential Equations 1 HÜ 1 12 13 Computer Science for Engineers - Programming Introduction to Control Systems Bioinformatics Concepts, Data Handling & Communication Introduction to Control Systems VL 2 Bioinformatics SE 2 14 Computer Science for Engineers - Programming VL 3 Introduction to Control Systems GÜ 2 15 Practical module 1 (dual study program, Bachelor's **Organic Chemistry** Chemical Reaction Engineering (part 1) Concepts, Data Handling & Communication dearee) Organic Chemistry VI 2 Chemical Reaction Engineering VI 2 Computer Science for Engineers - Programming GÜ 2 16 Bachelor thesis (dual study program) Practical term 1 Concepts, Data Handling & Communication PR 2 HÜ 2 Organic Chemistry Chemical Reaction Engineering 17 Organic Chemistry GÜ 2 18 19 Measurement Technology for Chemical and Bioprocess Practical module 4 (dual study program, Bachelor's Practical module 5 (dual study program, Bachelor's Engineering degree) degree) 20 Measurement Technology Practical term 4 Practical term 5 VI 2 21 Introduction to Chemical and Bioengineering **Fundamentals of Technical Drawing** Physical Fundamentals of Measurement VI 2 Introduction to Chemical and Bioengineering VL 2 Fundamentals of Technical Drawing VI 1 Technology 22 HÜ 1 Practical Course Measurement Technology Fundamentals of Technical Drawing PR 2 23 24 Biological and Biochemical Fundamentals (part 1) Practical module 2 (dual study program, Bachelor's dearee) 25 Biological and Biochemical Fundamentals VL 2 Practical module 3 (dual study program, Bachelor's Chemical Reaction Engineering (part 2) Economic and environmental project assessment Practical term 2 0 degree) Experimental Course Chemical Engineering PR 2 Basics of Environmental Project Assessment VL 2 26 Engineering Mechanics I (Stereostatics) Practical term 3 Case studies economic and environmental GÜ 1 Engineering Mechanics I VI 2 27 Fundamentals in Molecular Biology project assessment Engineering Mechanics I GÜ 2 Genetics and Molecular Biology VI 2 Basics of economic project assement VI 2 28 Engineering Mechanics I HŪ 2 PBL 1 Genetics and Molecular Biology 29 Molecular Biology Lab Course PR 3 30 Engineering Mechanics II (Elastostatics) Engineering Mechanics II VI 2 31 Bioprocess Technology II **Bioprocess Technology** GÜ 2 Engineering Mechanics II Bioprocess Technology II VL 2 Bioprocess Technology I VL 2 32 Engineering Mechanics II HÜ 2 Bioprocess Technology I HÜ 2 Bioprocess Technology II GÜ 2 33 Bioprocess Technology I - Fundamental Practical PR 2 Course 34 35 36 Biological and Biochemical Fundamentals (part 2) Fundamental Biological and Biochemical Practical PR 3 37 Advanced Practical Course in Bioengineering Course Advanced Practical Course in Bioengineering PR 2 38 Introduction to the Biological and Biochemical VL 1 Practical Course 39 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.