

Course of Study Mechatronics (Study Cohort w22)

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

Sample course plan A Bachelor Mechatronics (MECBS) Dual study program

1	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	Electrical Engineering II: Alternating Current Networks and Basic Devices	Mechanical Engineering: Design (part 1)	Mechanical Engineering: Design (part 2)	Technical Thermodynamics II	Electrical Machines and Actuators
2	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3	Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3	Embodiment Design and 3D-CAD Introduction and Practical Training VL 2	Team Project Design Methodology PBL 2	Technical Thermodynamics II VL 2	Electrical Machines and Actuators VL 3
3	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2	Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2	Mechanical Design Project I PBL 3	Mechanical Design Project II PBL 3	Technical Thermodynamics II HÜ 1	Electrical Machines and Actuators HÜ 2
4			Electrical Engineering III: Circuit Theory and Transients	Technical Thermodynamics I		
5			Circuit Theory VL 3	Technical Thermodynamics I VL 2		
6			Circuit Theory GÜ 2	Technical Thermodynamics I HÜ 1		
7	Mathematics I	Fundamentals of Mechanical Engineering Design			Foundations of Management	Semiconductor Circuit Design
8	Mathematics I VL 4	Fundamentals of Mechanical Engineering Design VL 2			Introduction to Management VL 3	Semiconductor Circuit Design VL 3
9	Mathematics I HÜ 2	Fundamentals of Mechanical Engineering Design HÜ 2			Management Tutorial GÜ 2	Semiconductor Circuit Design GÜ 1
10						
11			Mathematics III	Signals and Systems		
12			Analysis III VL 2	Signals and Systems VL 3		
13			Analysis III GÜ 1	Signals and Systems GÜ 2		
14		Mathematics II	Analysis III HÜ 1		Introduction to Control Systems	Bachelor thesis (dual study program)
15	Fundamentals of Materials Science (part 1)	Mathematics II VL 4	Differential Equations 1 VL 2		Introduction to Control Systems VL 2	
16	Fundamentals of Materials Science I VL 2	Mathematics II HÜ 2	Differential Equations 1 GÜ 1		Introduction to Control Systems GÜ 2	
17	Physical and Chemical Basics of Materials Science VL 2	Mathematics II GÜ 2	Differential Equations 1 HÜ 1			
18				Production Engineering		
19	Computer Science for Engineers - Introduction and Overview			Production Engineering I VL 2		
20	Computer Science for Engineers - Introduction and Overview VL 3			Production Engineering II VL 2	Measurement Technology for Mechanical Engineers	
21	Computer Science for Engineers - Introduction and Overview GÜ 2	Computer Science for Engineers - Programming Concepts, Data Handling & Communication	Practical module 3 (dual study program, Bachelor's degree)	Production Engineering II HÜ 1	Measurement Technology for Mechanical Engineering VL 2	
22	Computer Science for Engineers - Introduction and Overview GÜ 2	Computer Science for Engineers - Programming Concepts, Data Handling & Communication VL 3	Practical term 3 0	Production Engineering I HÜ 1	Measurement Technology for Mechanical Engineering PR 2	
23		Computer Science for Engineers - Programming Concepts, Data Handling & Communication GÜ 2			Practical Course: Measurement and Control Systems PR 2	
24			Engineering Mechanics III (Dynamics)	Mathematics IV		
25	Practical module 1 (dual study program, Bachelor's degree)		Engineering Mechanics III VL 3	Complex Functions VL 2	Simulation and Design of Mechatronic Systems	
26	Practical term 1 0		Engineering Mechanics III GÜ 2	Complex Functions GÜ 1	Simulation and Design of Mechatronic Systems VL 2	
27		Practical module 2 (dual study program, Bachelor's degree)	Engineering Mechanics III HÜ 1	Complex Functions HÜ 1	Simulation and Design of Mechatronic Systems HÜ 1	
28		Practical term 2 0		Differential Equations 2 VL 2	Simulation and Design of Mechatronic Systems PR 1	
29				Differential Equations 2 GÜ 1		
30				Differential Equations 2 HÜ 1		
31	Engineering Mechanics I (Stereostatics)				Practical module 4 (dual study program, Bachelor's degree)	
32	Engineering Mechanics I VL 2				Practical term 4 0	
33	Engineering Mechanics I GÜ 2	Engineering Mechanics II (Elastostatics)				
34	Engineering Mechanics I HÜ 1	Engineering Mechanics II VL 2			Practical module 5 (dual study program, Bachelor's degree)	
35		Engineering Mechanics II GÜ 2		Computational Mechanics	Practical term 5 0	
36		Engineering Mechanics II HÜ 2		Computational Multibody Dynamics IV 2		
37				Computational Mechanics GÜ 2		
38				Computational Structural Mechanics IV 2		
39		Fundamentals of Materials Science (part 2)				
40		Fundamentals of Materials Science II VL 2				

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.

