Course of Study Mechatronics (Study Cohort w22)

Legend

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

Sample course plan C Bachelor Mechatronics (MECBS)

LP					
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			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 I: Direct Current Networks and Electromagnetic Fields GÜ 2	Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2	**Electrical Engineering III: Circuit Theory and Transients**	**Technical Thermodynamics I**	Technical Thermodynamics II GÜ 1	
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**		Technical Thermodynamics I GÜ 1	**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	Mathematics I GÜ 2		**Mathematics III**	**Signals and Systems**		
11			Analysis III VL 2	Signals and Systems VL 3		
12			Analysis III GÜ 1	Signals and Systems GÜ 2		
13		**Mathematics II**	Analysis III HÜ 1		**Introduction to Control Systems**	**Bachelor Thesis**
14		Mathematics II VL 4	Differential Equations 1 VL 2		Introduction to Control Systems VL 2	
15	**Fundamentals of Materials Science (part 1)**	Mathematics II HÜ 2	Differential Equations 1 GÜ 1	**Production Engineering**	Introduction to Control Systems GÜ 2	
16	Fundamentals of Materials Science I VL 2	Mathematics II GÜ 2	Differential Equations 1 HÜ 1	Production Engineering I VL 2		
17	Physical and Chemical Basics of Materials Science VL 2			Production Engineering II VL 2		
18			**Engineering Mechanics III (Dynamics)**	Production Engineering II HÜ 1		
19	**Computer Science for Engineers - Introduction and Overview**		Engineering Mechanics III VL 3	Production Engineering I HÜ 1	**Measurement Technology for Mechanical Engineers**	
20	Computer Science for Engineers - Introduction and Overview VL 3		Engineering Mechanics III GÜ 2		Measurement Technology for Mechanical Engineering VL 2	
21		**Computer Science for Engineers - Programming Concepts, Data Handling & Communication**	Engineering Mechanics III HÜ 1	**Mathematics IV**	Measurement Technology for Mechanical Engineering PR 2	
22	Computer Science for Engineers - Introduction and Overview GÜ 2	Computer Science for Engineers - Programming Concepts, Data Handling & Communication VL 3		Complex Functions VL 2	Practical Course: Measurement and Control Systems PR 2	
23				Complex Functions GÜ 1		
24		Computer Science for Engineers - Programming Concepts, Data Handling & Communication GÜ 2		Complex Functions HÜ 1		
25	**Engineering Mechanics I (Stereostatics)**			Differential Equations 2 VL 2	**Simulation and Design of Mechatronic Systems**	
26	Engineering Mechanics I VL 2			Differential Equations 2 GÜ 1	Simulation and Design of Mechatronic Systems VL 2	
27	Engineering Mechanics I GÜ 2	**Engineering Mechanics II (Elastostatics)**		Differential Equations 2 HÜ 1	Simulation and Design of Mechatronic Systems HÜ 1	
28	Engineering Mechanics I HÜ 1	Engineering Mechanics II VL 2			Simulation and Design of Mechatronic Systems PR 1	
29		Engineering Mechanics II GÜ 2		**Computational Mechanics**		
30		Engineering Mechanics II HÜ 2		Computational Multibody Dynamics IV 2		
31				Computational Mechanics GÜ 2		
32				Computational Stuctural Mechanics IV 2		
33		**Fundamentals of Materials Science (part 2)**				
34		Fundamentals of Materials Science II VL 2				

Non-technical Courses for Bachelors (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.