Course of Study Mechatronics (Study Cohort w21)

Sample course plan A Bachelor Mechatronics (MECBS)

#	Col 1	Col 2	Col 3	Col 4	Col 5	Col 6
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**	**Production Engineering (part 2)**	Technical Thermodynamics II — GÜ 1	
5			Circuit Theory — VL 3	Production Engineering II — VL 2		
6			Circuit Theory — GÜ 2	Production Engineering II — HÜ 1		
7	**Mathematics I**	**Fundamentals of Mechanical Engineering Design**			**Technical Thermodynamics I**	**Foundations of Management**	**Semiconductor Circuit Design**
8	Linear Algebra I — VL 2	Fundamentals of Mechanical Engineering Design — VL 2			Technical Thermodynamics I — VL 2	Introduction to Management — VL 3	Semiconductor Circuit Design — VL 3
9	Linear Algebra I — GÜ 1	Fundamentals of Mechanical Engineering Design — HÜ 2			Technical Thermodynamics I — HÜ 1	Management Tutorial — GÜ 2	Semiconductor Circuit Design — GÜ 1
	Linear Algebra I — HÜ 1				Technical Thermodynamics I — GÜ 1		
10	Analysis I — VL 2		**Production Engineering (part 1)**				
11	Analysis I — GÜ 1		Production Engineering I — VL 2				
12	Analysis I — HÜ 1		Production Engineering I — HÜ 1				
13		**Mechanics II: Mechanics of Materials**	**Mathematics III**		**Signals and Systems**	**Introduction to Control Systems**	**Bachelor Thesis**
14		Mechanics II — VL 2	Analysis III — VL 2		Signals and Systems — VL 3	Introduction to Control Systems — VL 2	
		Mechanics II — GÜ 2	Analysis III — GÜ 1		Signals and Systems — GÜ 2	Introduction to Control Systems — GÜ 2	
15	**Mechanics I (Statics)**	Mechanics II — HÜ 2	Analysis III — HÜ 1				
16	Mechanics I — VL 2		Differential Equations 1 — VL 2				
17	Mechanics I — GÜ 2		Differential Equations 1 — GÜ 1				
18	Mechanics I — HÜ 1		Differential Equations 1 — HÜ 1				
19		**Mathematics II**			**Mathematics IV**	**Measurement Technology for Mechanical Engineers**	
20		Linear Algebra II — VL 2			Complex Functions — VL 2	Measurement Technology for Mechanical Engineering — VL 2	
		Linear Algebra II — GÜ 1			Complex Functions — GÜ 1		
21	**Fundamentals of Materials Science (part 1)**	Linear Algebra II — HÜ 1	**Engineering Mechanics III (Dynamics)**		Complex Functions — HÜ 1	Measurement Technology for Mechanical Engineering — PR 2	
22	Fundamentals of Materials Science I — VL 2	Analysis II — VL 2	Engineering Mechanics III — VL 3		Differential Equations 2 — VL 2	Practical Course: Measurement and Control Systems — PR 2	
23	Physical and Chemical Basics of Materials Science — VL 2	Analysis II — HÜ 1	Engineering Mechanics III — GÜ 2		Differential Equations 2 — GÜ 1		
24		Analysis II — GÜ 1	Engineering Mechanics III — HÜ 1		Differential Equations 2 — HÜ 1		
25	**Computer Science for Engineers - Introduction and Overview**				**Computational Mechanics**	**Simulation and Design of Mechatronic Systems**	
26	Computer Science for Engineers - Introduction and Overview — VL 3				Computational Multibody Dynamics — IV 2	Simulation and Design of Mechatronic Systems — VL 2	
27		**Computer Science for Engineers - Programming Concepts, Data Handling & Communication**			Computational Mechanics — GÜ 2	Simulation and Design of Mechatronic Systems — HÜ 1	
28	Computer Science for Engineers - Introduction and Overview — GÜ 2	Computer Science for Engineers - Programming Concepts, Data Handling & Communication — VL 3			Computational Stuctural Mechanics — IV 2	Simulation and Design of Mechatronic Systems — PR 1	
29							
30		Computer Science for Engineers - Programming Concepts, Data Handling & Communication — GÜ 2					
31							
32							
33		**Fundamentals of Materials Science (part 2)**					
34		Fundamentals of Materials Science II — VL 2					

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.