Course of Study Mechatronics (Study Cohort w18)

Sample course plan - Bachelor Mechatronics (MECBS)

Legend

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

LP	Semester 1	Form	Hrs/wk	Semester 2	Form	Hrs/wk	Semester 3	Form	Hrs/wk	Semester 4	Form	Hrs/wk	Semester 5	Form	Hrs/wk	Semester 6	Form	Hrs/wk
1	**Procedural Programming**			**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	Procedural Programming	VL	1	Electrical Engineering II: Alternating Current Networks and Basic Devices	VL	3	Embodiment Design and 3D-CAD	VL	2	Team Project Design Methodology	PBL	2	Technical Thermodynamics II	VL	2	Electrical Machines and Actuators	VL	3
3	Procedural Programming	HÜ	1	Electrical Engineering II: Alternating Current Networks and Basic Devices	UE	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	Procedural Programming	PR	2										Technical Thermodynamics II	UE	1			
5							**Electrical Engineering III: Circuit Theory and Transients**			**Production Engineering (part 2)**								
6							Circuit Theory	VL	3	Production Engineering II	VL	2						
7	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**			**Fundamentals of Mechanical Engineering Design**			Circuit Theory	UE	2	Production Engineering II	HÜ	1	**Foundations of Management**			**Semiconductor Circuit Design**		
8	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3	Fundamentals of Mechanical Engineering Design	VL	2				**Technical Thermodynamics I**			Introduction to Management	VL	3	Semiconductor Circuit Design	VL	3
9							**Production Engineering (part 1)**			Technical Thermodynamics I	VL	2	Management Tutorial	UE	2	Semiconductor Circuit Design	UE	1
10							Production Engineering I	VL	2	Technical Thermodynamics I	HÜ	1						
11							Production Engineering I	HÜ	1	Technical Thermodynamics I	UE	1						
12	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE	2	Fundamentals of Mechanical Engineering Design	HÜ	2												
13	**Mathematics I**			**Mechanics II: Mechanics of Materials**			**Computer Engineering**			**Signals and Systems**			**Introduction to Control Systems**			**Bachelor Thesis**		
14	Linear Algebra I	VL	2	Mechanics II	VL	2	Computer Engineering	VL	3	Signals and Systems	VL	3	Introduction to Control Systems	VL	2			
15	Linear Algebra I	UE	1	Mechanics II	UE	2	Computer Engineering	UE	1	Signals and Systems	UE	2	Introduction to Control Systems	UE	2			
16	Linear Algebra I	HÜ	1	Mechanics II	HÜ	2												
17	Analysis I	VL	2															
18	Analysis I	UE	1															
19	Analysis I	HÜ	1	**Mathematics II**			**Mathematics III**			**Mathematics IV**			**Measurement Technology for Mechanical Engineers**					
20				Linear Algebra II	VL	2	Analysis III	VL	2	Complex Functions	VL	2	Measurement Technology for Mechanical Engineering	VL	2			
21	**Mechanics I (Statics)**			Linear Algebra II	UE	1	Analysis III	UE	1	Complex Functions	UE	1	Measurement Technology for Mechanical Engineering	HÜ	1			
22	Mechanics I	VL	2	Linear Algebra II	HÜ	1	Analysis III	HÜ	1	Complex Functions	HÜ	1						
23	Mechanics I	UE	2	Analysis II	VL	2	Differential Equations 1	VL	2	Differential Equations 2	VL	2						
24	Mechanics I	HÜ	1	Analysis II	HÜ	1	Differential Equations 1	UE	1	Differential Equations 2	UE	1	Practical Course: Measurement and Control Systems	PR	2			
25				Analysis II	UE	1	Differential Equations 1	HÜ	1	Differential Equations 2	HÜ	1						
26										**Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)**			**Simulation and Design of Mechatronic Systems**					
27	**Fundamentals of Materials Science (part 1)**			**Fundamentals of Materials Science (part 2)**			**Mechanics III (Hydrostatics, Kinematics, Kinetics I)**			Mechanics IV	VL	3	Simulation and Design of Mechatronic Systems	VL	2			
28	Fundamentals of Materials Science I	VL	2	Fundamentals of Materials Science II	VL	2	Mechanics III	VL	3	Mechanics IV	UE	2	Simulation and Design of Mechatronic Systems	HÜ	1			
29	Physical and Chemical	VL	2				Mechanics III	UE	2	Mechanics IV	HÜ	1	Simulation and Design of	PR	1			
							Mechanics III	HÜ	1									

30	Basics of Materials Science			Mechatronic Systems
31				
32				
	Nontechnical Complementary 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.