

Course of Study Mechatronics (Study Cohort w19)

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	FormHrs/wk	Semester 2	FormHrs/wk	Semester 3	FormHrs/wk	Semester 4	FormHrs/wk	Semester 5	FormHrs/wk	Semester 6	FormHrs/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		VL 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		Procedural Programming		PR 2		Electrical Engineering II: Alternating Current Networks and Basic Devices		UE 2		Electrical Engineering III: Circuit Theory and Transients			Production Engineering (part 2)		Technical Thermodynamics II	Technical Thermodynamics II	UE 1				
5												Circuit Theory		VL 3		Production Engineering II	VL 2				
6												Circuit Theory		UE 2		Production Engineering II	HÜ 1				
7	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		Fundamentals of Mechanical Engineering Design		Production Engineering (part 1)		Technical Thermodynamics I		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		Production Engineering I		VL 2	Technical Thermodynamics I	VL 2	Introduction to Management	VL 3	Semiconductor Circuit Design	VL 3			
9		Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		HÜ 1		Fundamentals of Mechanical Engineering Design		HÜ 2		Production Engineering I		HÜ 1	Technical Thermodynamics I	HÜ 1	Management Tutorial	HÜ 2	Semiconductor Circuit Design	UE 1			
10		Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		UE 2		Fundamentals of Mechanical Engineering Design		HÜ 2		Production Engineering I		HÜ 1	Technical Thermodynamics I	UE 1							
11																					
12																					
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							Introduction to Control Systems	UE 2					
17		Analysis I	VL 2	Mathematics II		Mathematics III		Mathematics IV		Measurement Technology for Mechanical and Process Engineers											
18		Analysis I	UE 1		Linear Algebra II		VL 2		Analysis III			VL 2	Complex Functions	VL 2	Measurement Technology for Mechanical and Process Engineers	VL 2					
19		Analysis I	HÜ 1		Linear Algebra II		UE 1		Analysis III			UE 1	Complex Functions	UE 1	Measurement Technology for Mechanical and Process Engineers	VL 2					
20					Linear Algebra II		HÜ 1		Analysis III			HÜ 1	Complex Functions	HÜ 1	Measurement Technology for Mechanical and Process Engineers	HÜ 1					
21		Mechanics I (Statics)			Analysis II		VL 2		Differential Equations 1			VL 2	Differential Equations 2	VL 2	Measurement Technology for Mechanical and Process Engineers	HÜ 1					
22			Mechanics I		VL 2		Analysis II		HÜ 1			Differential Equations 1	UE 1	Differential Equations 2	UE 1	Measurement Technology for Mechanical and Process Engineers	HÜ 1				
23	Mechanics I		UE 2	Analysis II	UE 1	Differential Equations 1	HÜ 1	Differential Equations 2	HÜ 1	Practical Course: Measurement and Control Systems	PR 2										
24	Mechanics I		HÜ 1	Analysis II	UE 1	Differential Equations 1	HÜ 1	Differential Equations 2	HÜ 1												
25																					
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								
							Mechanics IV	HÜ 1	Mechatronic Systems												

29	Physical and Chemical	VL 2		Mechanics III	HÜ 1		Simulation and Design of	PR 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.