Course of Study Mechatronics (Study Cohort w18)

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 A Bachelor Mechatronics (MECBS)

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	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	Procedural Programming	PR 2			**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	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**		**Fundamentals of Mechanical Engineering Design**				**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			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	GÜ 2	Fundamentals of Mechanical Engineering Design	HÜ 2			Technical Thermodynamics I	HÜ 1	Management Tutorial	GÜ 2	Semiconductor Circuit Design	GÜ 1
10					**Production Engineering (part 1)**		Technical Thermodynamics I	GÜ 1				
11					Production Engineering I	VL 2						
12					Production Engineering I	HÜ 1						
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	GÜ 1	Mechanics II	GÜ 2	Computer Engineering	GÜ 1	Signals and Systems	GÜ 2	Introduction to Control Systems	GÜ 2		
16	Linear Algebra I	HÜ 1	Mechanics II	HÜ 2								
17	Analysis I	VL 2										
18	Analysis I	GÜ 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	GÜ 1	Analysis III	GÜ 1	Complex Functions	GÜ 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	Practical Course: Measurement and Control Systems	PR 2		
23	Mechanics I	GÜ 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	GÜ 1	Differential Equations 2	GÜ 1				
25			Analysis II	GÜ 1	Differential Equations 1	HÜ 1	Differential Equations 2	HÜ 1	**Simulation and Design of Mechatronic Systems**			
26							**Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)**		Simulation and Design of Mechatronic Systems	VL 2		
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	HÜ 1		
28	Fundamentals of Materials Science I	VL 2	Fundamentals of Materials Science II	VL 2	Mechanics III	VL 3	Mechanics IV	GÜ 2	Simulation and Design of Mechatronic Systems	PR 1		
29	Physical and Chemical Basics of Materials Science	VL 2			Mechanics III	GÜ 2	Mechanics IV	HÜ 1				
30					Mechanics III	HÜ 1						
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.