Course of Study Mechatronics (Study Cohort w19)

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)

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