Course of Study Mechanical Engineering (Study Cohort w20)

Sample course plan A Bachelor Mechanical Engineering (MBBS)
Specialisation Materials in Engineering Sciences

Legend

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

LP					
1	**Production Engineering (part 1)** Production Engineering I VL 2 Production Engineering I HÜ 1	**Production Engineering (part 2)** Production Engineering II VL 2 Production Engineering II HÜ 1	**Advanced Mechanical Engineering Design (part 1)** Advanced Mechanical Engineering Design I VL 2 Advanced Mechanical Engineering Design I HÜ 2	**Advanced Mechanical Engineering Design (part 2)** Advanced Mechanical Engineering Design II VL 2 Advanced Mechanical Engineering Design II HÜ 2	**Advanced Mechanical Design Project** Advanced Mechanical Design Project PBL 4	**Foundations of Management** Introduction to Management VL 3 Management Tutorial GÜ 2
2						
3						
4	**Computer Science for Mechanical Engineers** Computer Science for Mechanical Engineers VL 3 Computer Science for Mechanical Engineers GÜ 2	**Fundamentals of Materials Science (part 2)** Fundamentals of Materials Science II VL 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		
5						
6		**Fundamentals of Mechanical Engineering Design** Fundamentals of Mechanical Engineering Design VL 2 Fundamentals of Mechanical Engineering Design HÜ 2				
7			**Basics of Electrical Engineering** Basics of Electrical Engineering VL 3 Basics of Electrical Engineering GÜ 2	**Fluid Dynamics** Fluid Mechanics VL 3 Fluid Mechanics HÜ 2	**Introduction to Control Systems** Introduction to Control Systems VL 2 Introduction to Control Systems GÜ 2	**Enhanced Fundamentals of Materials Science** Materials for Energy Storage and Conversion VL 2 Enhanced Fundamentals: Ceramics and Polymers VL 2 Enhanced Fundamentals: Ceramics and Polymers HÜ 1
8						
9						
10	**Mathematics I** Linear Algebra I VL 2	**Technical Thermodynamics I** Technical Thermodynamics I VL 2				
11	Linear Algebra I GÜ 1	Technical Thermodynamics I HÜ 1				
12	Linear Algebra I HÜ 1	Technical Thermodynamics I GÜ 1				
13	Analysis I VL 2		**Technical Thermodynamics II** Technical Thermodynamics II VL 2	**Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)** Mechanics IV VL 3	**Measurement Technology for Mechanical Engineers** Measurement Technology for Mechanical Engineering VL 2	**Materials Engineering: Materials Selection, Processing and Modelling** Materials Selection and Processing VL 3
14	Analysis I GÜ 1		Technical Thermodynamics II HÜ 1	Mechanics IV GÜ 2	Measurement Technology for Mechanical Engineering HÜ 1	Materials and Process Modeling VL 3
15	Analysis I HÜ 1		Technical Thermodynamics II GÜ 1	Mechanics IV HÜ 1	Practical Course: Measurement and Control Systems PR 2	
16						
17						
18	**Mechanics I (Statics)** Mechanics I VL 2	**Mechanics II: Mechanics of Materials** Mechanics II VL 2				
19	Mechanics I GÜ 2	Mechanics II GÜ 2	**Mathematics III** Analysis III VL 2	**Electrical Machines and Actuators** Electrical Machines and Actuators VL 3	**Material Science Laboratory** Companion Lecture for Materials Science Laboratory VL 2	**Bachelor Thesis**
20	Mechanics I HÜ 1	Mechanics II HÜ 2	Analysis III GÜ 1	Electrical Machines and Actuators HÜ 2	Material Science Laboratory PR 4	
21			Analysis III HÜ 1			
22			Differential Equations 1 VL 2			
23			Differential Equations 1 GÜ 1			
24	**Fundamentals of Materials Science (part 1)** Fundamentals of Materials Science I VL 2	**Mathematics II** Linear Algebra II VL 2	Differential Equations 1 HÜ 1			
25	Physical and Chemical Basics of Materials Science VL 2	Linear Algebra II GÜ 1				
26		Linear Algebra II HÜ 1				
27		Analysis II VL 2				
28	**Team Project MB** Team Project MB PBL 6	Analysis II HÜ 1	**Mechanics III (Dynamics)** Mechanics III VL 3			
29		Analysis II GÜ 1	Mechanics III GÜ 2			
30			Mechanics III HÜ 1			
31						
32						
33						

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.