Course of Study Mechanical Engineering (Study Cohort w20)

Sample course plan B Bachelor Mechanical Engineering (MBBS)

Specialisation Energy Systems

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	**Reciprocating Machinery (part 2)** Internal Combustion Engines I VL 2 Internal Combustion Engines I HÜ 1
8						
9						
10	**Mathematics I** Linear Algebra I VL 2					
11	Linear Algebra I GÜ 1					
12	Linear Algebra I HÜ 1	**Technical Thermodynamics I** Technical Thermodynamics I VL 2				
13	Analysis I VL 2	Technical Thermodynamics I HÜ 1				
14	Analysis I GÜ 1	Technical Thermodynamics I GÜ 1				
15	Analysis I HÜ 1					
16			**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	**Bachelor Thesis**
17			Technical Thermodynamics II HÜ 1	Mechanics IV GÜ 2	Measurement Technology for Mechanical Engineering HÜ 1	
18	**Mechanics I (Statics)** Mechanics I VL 2	**Mechanics II: Mechanics of Materials** Mechanics II VL 2	Technical Thermodynamics II GÜ 1	Mechanics IV HÜ 1	Practical Course: Measurement and Control Systems PR 2	
19	Mechanics I GÜ 2	Mechanics II GÜ 2				
20	Mechanics I HÜ 1	Mechanics II HÜ 2	**Mathematics III** Analysis III VL 2	**Fundamentals of Production and Quality Management** Production Process Organization VL 2	**Heat Transfer** Heat Transfer VL 3	
21			Analysis III GÜ 1	Quality Management VL 2	Heat Transfer HÜ 2	
22			Analysis III HÜ 1			
23			Differential Equations 1 VL 2			
24	**Fundamentals of Materials Science (part 1)** Fundamentals of Materials Science I VL 2	**Mathematics II** Linear Algebra II VL 2	Differential Equations 1 GÜ 1			
25	Physical and Chemical Basics of Materials Science VL 2	Linear Algebra II GÜ 1	Differential Equations 1 HÜ 1		**Reciprocating Machinery (part 1)** Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines VL 1	
26		Linear Algebra II HÜ 1			Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines 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		**Gas and Steam Power Plants** Gas and Steam Power Plants VL 3	
29		Analysis II GÜ 1	Mechanics III GÜ 2		Gas and Steam Power Plants HÜ 1	
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.