Course of Study Mechanical Engineering (Study Cohort w23)

Sample course plan B Bachelor Mechanical Engineering (MBBS) Dual study program

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	**Mathematics I** Mathematics I VL 4 Mathematics I HÜ 2 Mathematics I GÜ 2	**Fundamentals of Mechanical Engineering Design** Fundamentals of Mechanical Engineering Design VL 2 Fundamentals of Mechanical Engineering Design HÜ 2	**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			**Mechanical Engineering: Design (part 1)** Embodiment Design and 3D-CAD Introduction and Practical Training 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						
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7		**Technical Thermodynamics I** Technical Thermodynamics I VL 2 Technical Thermodynamics I HÜ 1 Technical Thermodynamics I GÜ 1	**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	**Fundamentals of Materials Science** Fundamentals of Materials Science II VL 2 Fundamentals of Materials Science I VL 2 Physical and Chemical Basics of Materials Science VL 2					**Bachelor thesis (dual study program)**
10						
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13		**Production Engineering** Production Engineering I VL 2 Production Engineering II VL 2 Production Engineering II HÜ 1 Production Engineering I HÜ 1	**Technical Thermodynamics II** Technical Thermodynamics II VL 2 Technical Thermodynamics II HÜ 1 Technical Thermodynamics II GÜ 1	**Practical module 4 (dual study program, Bachelor's degree)** Practical term 4 0	**Measurement Technology for Mechanical Engineers** Measurement Technology for Mechanical Engineering VL 2 Measurement Technology for Mechanical Engineering PR 2 Practical Course: Measurement and Control Systems PR 2	
14						
15	**Team Project MB** Team Project MB PBL 6					
16						
17						
18						
19		**Mathematics II** Mathematics II VL 4 Mathematics II HÜ 2 Mathematics II GÜ 2	**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	**Computational Mechanics** Computational Multibody Dynamics IV 2 Computational Mechanics GÜ 2 Computational Stuctural Mechanics IV 2	**Practical module 5 (dual study program, Bachelor's degree)** Practical term 5 0	
20						
21	**Computer Science for Engineers - Introduction and Overview** Computer Science for Engineers - Introduction and Overview VL 3 Computer Science for Engineers - Introduction and Overview GÜ 2					
22						
23						
24						
25				**Fundamentals of Production and Quality Management** Production Process Organization VL 2 Quality Management VL 2	**Heat Transfer** Heat Transfer VL 3 Heat Transfer HÜ 2	
26						
27	**Practical module 1 (dual study program, Bachelor's degree)** Practical term 1 0	**Practical module 2 (dual study program, Bachelor's degree)** Practical term 2 0	**Practical module 3 (dual study program, Bachelor's degree)** Practical term 3 0			
28						
29						
30						
31					**Reciprocating Machinery (part 1)** Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines VL 1 Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines HÜ 1	
32						
33	**Engineering Mechanics I (Stereostatics)** Engineering Mechanics I VL 2 Engineering Mechanics I GÜ 2 Engineering Mechanics I HÜ 1	**Engineering Mechanics II (Elastostatics)** Engineering Mechanics II VL 2 Engineering Mechanics II GÜ 2 Engineering Mechanics II HÜ 2	**Engineering Mechanics III (Dynamics)** Engineering Mechanics III VL 3 Engineering Mechanics III GÜ 2 Engineering Mechanics III HÜ 1		**Gas and Steam Power Plants** Gas and Steam Power Plants VL 3 Gas and Steam Power Plants HÜ 1	
34						
35						
36						
37						
38						

Linking theory and practice (dual study program, Bachelor's degree) (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.