Course of Study Mechanical Engineering (Study Cohort w23)

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

Specialisation Aircraft Systems Engineering

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**	**Fundamentals of Mechanical Engineering Design**	**Advanced Mechanical Engineering Design (part 1)**	**Advanced Mechanical Engineering Design (part 2)**	**Advanced Mechanical Design Project**	**Foundations of Management**
2	Mathematics I VL 4	Fundamentals of Mechanical Engineering Design VL 2	Advanced Mechanical Engineering Design I VL 2	Advanced Mechanical Engineering Design II VL 2	Advanced Mechanical Design Project PBL 4	Introduction to Management VL 3
3	Mathematics I HÜ 2	Fundamentals of Mechanical Engineering Design HÜ 2	Advanced Mechanical Engineering Design I HÜ 2	Advanced Mechanical Engineering Design II HÜ 2		Management Tutorial GÜ 2
4	Mathematics I GÜ 2		**Mechanical Engineering: Design (part 1)**	**Mechanical Engineering: Design (part 2)**		
5			Embodiment Design and 3D-CAD Introduction and Practical Training VL 2	Team Project Design Methodology PBL 2		
6			Mechanical Design Project I PBL 3	Mechanical Design Project II PBL 3		
7		**Technical Thermodynamics I**	**Basics of Electrical Engineering**	**Fluid Dynamics**	**Introduction to Control Systems**	**Digital Product Development and Lightweight Design**
8		Technical Thermodynamics I VL 2	Basics of Electrical Engineering VL 3	Fluid Mechanics VL 3	Introduction to Control Systems VL 2	Digital Product Development VL 2
9	**Fundamentals of Materials Science**	Technical Thermodynamics I HÜ 1	Basics of Electrical Engineering GÜ 2	Fluid Mechanics HÜ 2	Introduction to Control Systems GÜ 2	Development of Lightweight Design Products VL 2
10	Fundamentals of Materials Science II VL 2	Technical Thermodynamics I GÜ 1				CAE-Team Project PBL 2
11	Fundamentals of Materials Science I VL 2					
12	Physical and Chemical Basics of Materials Science VL 2					
13		**Production Engineering**	**Technical Thermodynamics II**	**Practical module 4 (dual study program, Bachelor's degree)**	**Measurement Technology for Mechanical Engineers**	**Aeronautical Systems**
14		Production Engineering I VL 2	Technical Thermodynamics II VL 2	Practical term 4 0	Measurement Technology for Mechanical Engineering VL 2	Air Transportation Systems VL 2
15	**Team Project MB**	Production Engineering II VL 2	Technical Thermodynamics II HÜ 1		Measurement Technology for Mechanical Engineering PR 2	Fundamentals of Aircraft Systems VL 2
16	Team Project MB PBL 6	Production Engineering II HÜ 1	Technical Thermodynamics II GÜ 1		Practical Course: Measurement and Control Systems PR 2	Fundamentals of Aircraft Systems GÜ 1
17		Production Engineering I HÜ 1				Air Transportation Systems HÜ 1
18						
19		**Mathematics II**	**Mathematics III**	**Computational Mechanics**	**Practical module 5 (dual study program, Bachelor's degree)**	**Modeling, Simulation and Optimization (EN)**
20		Mathematics II VL 4	Analysis III VL 2	Computational Multibody Dynamics IV 2	Practical term 5 0	Modeling, Simulation and Optimization IV 4
21	**Computer Science for Engineers - Introduction and Overview**	Mathematics II HÜ 2	Analysis III GÜ 1	Computational Mechanics GÜ 2		
22	Computer Science for Engineers - Introduction and Overview VL 3	Mathematics II GÜ 2	Analysis III HÜ 1	Computational Stuctural Mechanics IV 2		
23	Computer Science for Engineers - Introduction and Overview GÜ 2		Differential Equations 1 VL 2			
24			Differential Equations 1 GÜ 1			
25			Differential Equations 1 HÜ 1	**Fundamentals of Production and Quality Management**		**Bachelor thesis (dual study program)**
26				Production Process Organization VL 2		
27	**Practical module 1 (dual study program, Bachelor's degree)**	**Practical module 2 (dual study program, Bachelor's degree)**	**Practical module 3 (dual study program, Bachelor's degree)**	Quality Management VL 2		
28	Practical term 1 0	Practical term 2 0	Practical term 3 0			
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33	**Engineering Mechanics I (Stereostatics)**	**Engineering Mechanics II (Elastostatics)**	**Engineering Mechanics III (Dynamics)**			
34	Engineering Mechanics I VL 2	Engineering Mechanics II VL 2	Engineering Mechanics III VL 3			
35	Engineering Mechanics I GÜ 2	Engineering Mechanics II GÜ 2	Engineering Mechanics III GÜ 2			
36	Engineering Mechanics I HÜ 1	Engineering Mechanics II HÜ 2	Engineering Mechanics III HÜ 1			
37						
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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.