

Course of Study Mechanical Engineering (Study Cohort w23)

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

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

Specialisation Materials in Engineering Sciences

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						
5				Mechanical Engineering: Design (part 1)	Mechanical Engineering: Design (part 2)		
6				Embodiment Design and 3D-CAD Introduction and Practical Training VL 2	Team Project Design Methodology PBL 2		
7				Mechanical Design Project I PBL 3	Mechanical Design Project II PBL 3		
8			Technical Thermodynamics I	Basics of Electrical Engineering	Fluid Dynamics	Introduction to Control Systems	Enhanced Fundamentals of Materials Science
9	Fundamentals of Materials Science		Technical Thermodynamics I VL 2	Basics of Electrical Engineering VL 3	Fluid Mechanics VL 3	Introduction to Control Systems VL 2	Materials for Energy Storage and Conversion VL 2
10	Fundamentals of Materials Science II VL 2		Technical Thermodynamics I HÜ 1	Basics of Electrical Engineering GÜ 2	Fluid Mechanics HÜ 2	Introduction to Control Systems GÜ 2	Advanced Ceramics and Polymers VL 2
11	Fundamentals of Materials Science I VL 2		Technical Thermodynamics I GÜ 1				Advanced Ceramics and Polymers HÜ 1
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	Materials Engineering: Materials Selection, Processing and Modelling
14			Production Engineering I VL 2	Technical Thermodynamics II VL 2	Practical term 4 0	Measurement Technology for Mechanical Engineering VL 2	Materials Selection and Processing VL 3
15	Team Project MB		Production Engineering II VL 2	Technical Thermodynamics II HÜ 1		Measurement Technology for Mechanical Engineering PR 2	Materials and Process Modeling VL 3
16	Team Project MB PBL 6		Production Engineering II HÜ 1	Technical Thermodynamics II GÜ 1		Practical Course: Measurement and Control Systems PR 2	
17			Production Engineering I HÜ 1				
18							
19			Mathematics II	Mathematics III	Computational Mechanics	Practical module 5 (dual study program, Bachelor's degree)	Bachelor thesis (dual study program)
20			Mathematics II VL 4	Analysis III VL 2	Computational Multibody Dynamics IV 2	Practical term 5 0	
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 Structural Mechanics IV 2		
23	Computer Science for Engineers - Introduction and Overview GÜ 2			Differential Equations 1 VL 2			
24	Computer Science for Engineers - Introduction and Overview HÜ 1			Differential Equations 1 GÜ 1			
25				Differential Equations 1 HÜ 1			
26					Electrical Machines and Actuators	Materials Science Laboratory	
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)	Electrical Machines and Actuators VL 3	Companion Lecture for Materials Science Laboratory VL 2	
28	Practical term 1 0		Practical term 2 0	Practical term 3 0	Electrical Machines and Actuators HÜ 2	Material Science Laboratory PR 4	
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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			
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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.

