

# Course of Study Mechanical Engineering (Study Cohort w23)

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

Specialisation Product Development and Production

Core Qualification Compulsory		Specialisation Compulsory		Focus Compulsory		Thesis Compulsory	
Core Qualification Elective Compulsory		Specialisation Elective Compulsory		Focus Elective Compulsory		Interdisciplinary complement	
1	<b>Mathematics I</b>	<b>Fundamentals of Mechanical Engineering Design</b>	<b>Advanced Mechanical Engineering Design (part 1)</b>	<b>Advanced Mechanical Engineering Design (part 2)</b>	<b>Advanced Mechanical Design Project</b>	<b>Foundations of Management</b>	
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		<b>Mechanical Engineering: Design (part 1)</b>	<b>Mechanical Engineering: Design (part 2)</b>			
5			Embodiment Design and 3D-CAD Introduction VL 2	Team Project Design Methodology PBL 2			
6			and Practical Training	Mechanical Design Project II PBL 3			
7			Mechanical Design Project I PBL 3				
8		<b>Technical Thermodynamics I</b>	<b>Basics of Electrical Engineering</b>	<b>Fluid Dynamics</b>	<b>Introduction to Control Systems</b>	<b>Digital Product Development and Lightweight Design</b>	
9	<b>Fundamentals of Materials Science</b>	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	
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	Development of Lightweight Design Products VL 2	
11	Fundamentals of Materials Science I VL 2	Technical Thermodynamics I GÜ 1				CAE-Team Project PBL 2	
12	Physical and Chemical Basics of Materials Science VL 2						
13		<b>Production Engineering</b>	<b>Technical Thermodynamics II</b>	<b>Practical module 4 (dual study program, Bachelor's degree)</b>	<b>Measurement Technology for Mechanical Engineers</b>	<b>Bachelor thesis (dual study program)</b>	
14		Production Engineering I VL 2	Technical Thermodynamics II VL 2	Practical term 4 0	Measurement Technology for Mechanical Engineering VL 2		
15	<b>Team Project MB</b>	Production Engineering II VL 2	Technical Thermodynamics II HÜ 1		Measurement Technology for Mechanical Engineering PR 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		
17		Production Engineering I HÜ 1					
18							
19		<b>Mathematics II</b>	<b>Mathematics III</b>	<b>Computational Mechanics</b>	<b>Practical module 5 (dual study program, Bachelor's degree)</b>		
20		Mathematics II VL 4	Analysis III VL 2	Computational Multibody Dynamics IV 2	Practical term 5 0		
21	<b>Computer Science for Engineers - Introduction and Overview</b>	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				<b>Fundamentals of Production and Quality Management</b>	<b>Production Technology</b>		
27	<b>Practical module 1 (dual study program, Bachelor's degree)</b>	<b>Practical module 2 (dual study program, Bachelor's degree)</b>	<b>Practical module 3 (dual study program, Bachelor's degree)</b>	Production Process Organization VL 2	Forming and Cutting Technology VL 2		
28	Practical term 1 0	Practical term 2 0	Practical term 3 0	Quality Management VL 2	Forming and Cutting Technology HÜ 1		
29					Fundamentals of Machine Tools VL 2		
30					Fundamentals of Machine Tools HÜ 1		
31							
32					<b>Materials Science Laboratory</b>		
33	<b>Engineering Mechanics I (Stereostatics)</b>	<b>Engineering Mechanics II (Elastostatics)</b>	<b>Engineering Mechanics III (Dynamics)</b>		Companion Lecture for Materials Science VL 2		
34	Engineering Mechanics I VL 2	Engineering Mechanics II VL 2	Engineering Mechanics III VL 3		Laboratory		
35	Engineering Mechanics I GÜ 2	Engineering Mechanics II GÜ 2	Engineering Mechanics III GÜ 2		Material Science Laboratory PR 4		
36	Engineering Mechanics I HÜ 1	Engineering Mechanics II HÜ 2	Engineering Mechanics III HÜ 1				
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.

