

# Course of Study Mechanical Engineering (Study Cohort w23)

Sample course plan B 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 Energy Systems																					
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																		
5								<b>Mechanical Engineering: Design (part 1)</b>				<b>Mechanical Engineering: Design (part 2)</b>									
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				<b>Technical Thermodynamics I</b>				<b>Basics of Electrical Engineering</b>				<b>Fluid Dynamics</b>				<b>Introduction to Control Systems</b>			<b>Reciprocating Machinery (part 2)</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	Internal Combustion Engines I	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	Internal Combustion Engines I	HÜ	1
11	Fundamentals of Materials Science I	VL	2	Technical Thermodynamics I	GÜ	1															
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>					
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		Differential Equations 1	VL	2		Computational Structural Mechanics	IV	2							
23	Computer Science for Engineers - Introduction and Overview	GÜ	2					Differential Equations 1	GÜ	1											
24	Computer Science for Engineers - Introduction and Overview	GÜ	2					Differential Equations 1	HÜ	1											
25																					
26												<b>Fundamentals of Production and Quality Management</b>				<b>Heat Transfer</b>					
27	<b>Practical module 1 (dual study program, Bachelor's degree)</b>											Production Process Organization	VL	2		Heat Transfer	VL	3			
28	Practical term 1	0		<b>Practical module 2 (dual study program, Bachelor's degree)</b>				<b>Practical module 3 (dual study program, Bachelor's degree)</b>				Quality Management	VL	2		Heat Transfer	HÜ	2			
29				Practical term 2	0			Practical term 3	0												
30																					
31																					
32																					
33	<b>Engineering Mechanics I (Stereostatics)</b>			<b>Engineering Mechanics II (Elastostatics)</b>				<b>Engineering Mechanics III (Dynamics)</b>								<b>Reciprocating Machinery (part 1)</b>					
34	Engineering Mechanics I	VL	2	Engineering Mechanics II	VL	2		Engineering Mechanics III	VL	3						Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines	VL	1			
35	Engineering Mechanics I	GÜ	2	Engineering Mechanics II	GÜ	2		Engineering Mechanics III	GÜ	2						Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines	HÜ	1			
36	Engineering Mechanics I	HÜ	1	Engineering Mechanics II	HÜ	2		Engineering Mechanics III	HÜ	1						<b>Gas and Steam Power Plants</b>					
37																Gas and Steam Power Plants	VL	3			
38																Gas and Steam Power Plants	HÜ	1			

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

