

# Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w22)

Sample course plan B Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7)) Dual study program

Legend:

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

Specialisation	Mechanical Engineering	Focus	Mechatronics	FormHrs/wk	Semester 3	FormHrs/wk	Semester 4	FormHrs/wk	Semester 5	FormHrs/wk	Semester 6	FormHrs/wk	Semester 7	FormHrs/wk
1	<b>Chemistry</b>		<b>Electrical Engineering II: Alternating Current Networks and Basic Devices</b>		<b>Technical Thermodynamics II</b>		<b>Signals and Systems</b>		<b>Introduction to Control Systems</b>		<b>Foundations of Management</b>		<b>Advanced Internship AIW/ ES</b>	
2	Chemistry I+II VL 4		Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3		Technical Thermodynamics II VL 2		Signals and Systems VL 3		Introduction to Control Systems VL 2		Introduction to Management VL 3		Advanced Internship AIW/ ES: SE 1	
3	Chemistry I+II HÜ 2		Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2		Technical Thermodynamics II HÜ 1		Signals and Systems GÜ 2		Introduction to Control Systems GÜ 2		Management Tutorial GÜ 2		Preparation	
4					Technical Thermodynamics II GÜ 1								Advanced Internship AIW/ ES: Internship-accompanying Seminar SE 1	
5														
6														
7	<b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b>		<b>Fundamentals of Mechanical Engineering Design</b>		<b>Mathematics III</b>		<b>Practical module 4 (dual study program, Bachelor's degree)</b>		<b>Practical module 5 (dual study program, Bachelor's degree)</b>		<b>Electrical Machines and Actuators</b>			
8	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3		Fundamentals of Mechanical Engineering Design VL 2		Analysis III VL 2		Practical term 4 0		Practical term 5 0		Electrical Machines and Actuators VL 3			
9	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2		Fundamentals of Mechanical Engineering Design HÜ 2		Analysis III HÜ 1						Electrical Machines and Actuators HÜ 2			
10					Differential Equations 1 VL 2									
11					Differential Equations 1 GÜ 1									
12					Differential Equations 1 HÜ 1									
13	<b>Mathematics I</b>		<b>Technical Thermodynamics I</b>				<b>Fluid Dynamics</b>		<b>Measurement Technology for Mechanical Engineers</b>		<b>Semiconductor Circuit Design</b>			
14	Mathematics I VL 4		Technical Thermodynamics I VL 2				Fluid Mechanics VL 3		Measurement Technology for Mechanical Engineers VL 2		Semiconductor Circuit Design VL 3			
15	Mathematics I HÜ 2		Technical Thermodynamics I HÜ 1				Fluid Mechanics HÜ 2		Measurement Technology for Mechanical Engineers HÜ 1		Semiconductor Circuit Design GÜ 1			
16	Mathematics I GÜ 2		Technical Thermodynamics I GÜ 1						Practical Course: Measurement and Control Systems PR 2					
17					<b>Practical module 3 (dual study program, Bachelor's degree)</b>									
18					Practical term 3 0									
19			<b>Mathematics II</b>				<b>Computational Mechanics</b>		<b>Electrical Engineering III: Circuit Theory and Transients</b>		<b>Mathematics IV</b>		<b>Bachelor thesis (dual study program)</b>	
20			Mathematics II VL 4				Computational Multibody Dynamics IV 2		Circuit Theory VL 3		Complex Functions VL 2			
21	<b>Computer Science for Engineers - Introduction and Overview</b>		Mathematics II HÜ 2		<b>Engineering Mechanics III (Dynamics)</b>		Computational Mechanics GÜ 2		Circuit Theory GÜ 2		Complex Functions GÜ 1			
22	Computer Science for Engineers - Introduction and Overview VL 3		Mathematics II GÜ 2		Engineering Mechanics III VL 3		Computational Structural Mechanics IV 2				Complex Functions HÜ 1			
23					Engineering Mechanics III GÜ 2						Differential Equations 2 VL 2			
24					Engineering Mechanics III HÜ 1						Differential Equations 2 GÜ 1			
25											Differential Equations 2 HÜ 1			
26														
27	<b>Practical module 1 (dual study program, Bachelor's degree)</b>		<b>Practical module 2 (dual study program, Bachelor's degree)</b>		<b>Advanced Mechanical Engineering Design (part 1)</b>		<b>Advanced Mechanical Engineering Design (part 2)</b>		<b>Simulation and Design of Mechatronic Systems</b>		<b>Computer Science for Engineers - Programming Concepts, Data Handling &amp; Communication</b>			
28	Practical term 1 0		Practical term 2 0		Advanced Mechanical Engineering Design I VL 2		Advanced Mechanical Engineering Design II HÜ 2		Simulation and Design of Mechatronic Systems VL 2		Computer Science for Engineers - Programming Concepts, Data Handling & Communication VL 3			
29					Advanced Mechanical Engineering Design I HÜ 2		Team Project Design Methodology PBL 2		Simulation and Design of Mechatronic Systems HÜ 1		Computer Science for Engineers - Programming Concepts, Data Handling & Communication GÜ 2			
30					Advanced Mechanical Engineering Design I PBL 3		Mechanical Design Project II PBL 3		Simulation and Design of Mechatronic Systems PR 1					
31					<b>Mechanical Engineering: Design (part 1)</b>									
32					Embodiment Design and 3D-CAD Introduction and Practical Training VL 2		<b>Fundamentals of Materials Science (part 2)</b>							
33	<b>Engineering Mechanics I (Stereostatics)</b>		<b>Engineering Mechanics II (Elastostatics)</b>		Mechanical Design Project I PBL 3		Fundamentals of Materials Science II VL 2							
34	Engineering Mechanics I VL 2		Engineering Mechanics II VL 2				Fundamentals of Materials Science I VL 2							
35	Engineering Mechanics I GÜ 2		Engineering Mechanics II GÜ 2				Physical and Chemical Basics of Materials Science VL 2							
36	Engineering Mechanics I HÜ 1		Engineering Mechanics II HÜ 2											
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.

