

# Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w18)

Sample course plan A Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))  
Specialisation Mechanical Engineering, Focus Materials in Engineering Sciences

Legend:

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

LP	Semester 1	Form	Semester 2	Form	Semester 3	Form	Semester 4	Form	Semester 5	Form	Semester 6	Form	Semester 7	Form														
1	<b>Chemistry</b>	VL 2	<b>Electrical Engineering II: Alternating Current Networks and Basic Devices</b>	VL 3	<b>Technical Thermodynamics II</b>	VL 2	<b>Mechanical Engineering: Design (part 2)</b>	PBL2	<b>Introduction to Control Systems</b>	VL 2	<b>Foundations of Management</b>	VL 3	<b>Advanced Internship AIW/GES</b>															
2															Chemistry I		Technical Thermodynamics II		Team Project Design Methodology		Introduction to Control Systems		Introduction to Management					
3															Chemistry II	VL 2	Electrical Engineering II: Alternating Current Networks and Basic Devices		Technical Thermodynamics II	HÜ 1	Mechanical Design Project II	PBL3	Introduction to Control Systems	UE 2	Management Tutorial	UE 2		
4															Chemistry I	HÜ 1			Technical Thermodynamics II	UE 1	<b>Fundamentals of Materials Science (part 2)</b>							
5															Chemistry II	HÜ 1			Technical Thermodynamics II			Fundamentals of Materials Science II	VL 2					
6																		Electrical Engineering II: Alternating Current Networks and Basic Devices	UE 2									
7	<b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b>	VL 3	<b>Fundamentals of Mechanical Engineering Design</b>	VL 2	<b>Mathematics III</b>	VL 2	<b>Advanced Mechanical Engineering Design (part 2)</b>	VL 2	<b>Computer Engineering</b>	VL 3	<b>Enhanced Fundamentals of Materials Science</b>	VL 2																
8															Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		Analysis III	UE 1	Advanced Mechanical Engineering Design II		Computer Engineering	UE 1	Enhanced Fundamentals: Metals					
9																	Fundamentals of Mechanical Engineering Design	HÜ 2	Analysis III	HÜ 1	Advanced Mechanical Engineering Design II	HÜ 2	Enhanced Fundamentals: Ceramics and Polymers	VL 2				
10																	Fundamentals of Mechanical Engineering Design		Differential Equations 1	VL 2	<b>Fluid Dynamics</b>			Enhanced Fundamentals: Ceramics and Polymers	HÜ 1			
11																			Differential Equations 1	UE 1		Fluid Mechanics	VL 3					
12																			Differential Equations 1	HÜ 1		Fluid Mechanics	HÜ 2					
13																												
14	<b>Mathematics I</b>	VL 2	<b>Technical Thermodynamics I</b>	VL 2	<b>Mechanics III (Hydrostatics, Kinematics, Kinetics I)</b>	VL 3	<b>Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)</b>	VL 3	<b>Measurement Technology for Mechanical Engineers</b>	VL 2	<b>Structural Materials (part 2)</b>	VL 2																
15															Linear Algebra I	UE 1	Technical Thermodynamics I	HÜ 1	Mechanics III	UE 2	Mechanics IV	UE 2	Measurement Technology for Mechanical Engineering		Fundamentals of Mechanical Properties of Materials			
16															Linear Algebra I	HÜ 1	Technical Thermodynamics I		Mechanics III	HÜ 1	Mechanics IV	HÜ 1	Measurement Technology for Mechanical Engineering	HÜ 1	<b>Electrical Machines and Actuators</b>			
17															Analysis I	VL 2	Technical Thermodynamics I	UE 1	Mechanics III	UE 2	Mechanics IV	UE 2	Measurement Technology for Mechanical Engineering			Electrical Machines and Actuators	VL 3	
18															Analysis I	UE 1	Technical Thermodynamics I		Mechanics III	HÜ 1	Mechanics IV	HÜ 1	Measurement Technology for Mechanical Engineering	PR 2		Electrical Machines and Actuators	HÜ 2	
19																							Practical Course: Measurement and Control Systems					
20																												
21	<b>Mechanics I (Statics)</b>	VL 2	<b>Mechanics II: Mechanics of Materials</b>	VL 2	<b>Mechanical Engineering: Design (part 1)</b>	VL 3	<b>Signals and Systems</b>	VL 3	<b>Numerical Mathematics I</b>	VL 2																		
22														Mechanics I	UE 2	Mechanics II	UE 2	Signals and Systems	UE 2	Numerical Mathematics I	UE 2							

23	Mechanics I Mechanics I	UE 2 HÜ 1	Mechanics II	HÜ 2	Embodiment Design and 3D-CAD Mechanical Design Project I	VL 2 PBL3	Signals and Systems	UE 2	Mathematics I	
24										
25										
26										
27	<b>Programming in C</b> Programming in C Programming in C	VL 1 PR 1	<b>Mathematics II</b> Linear Algebra II Linear Algebra II Linear Algebra II	VL 2 UE 1 HÜ 1	<b>Fundamentals of Materials Science (part 1)</b> Fundamentals of Materials Science I Physical and Chemical Basics of Materials Science	VL 2 VL 2			<b>Structural Materials (part 1)</b> Welding Technology	VL 3
28			Analysis II	VL 2						
29	<b>Physics for Engineers (AIW)</b> Physics for Engineers Physics for Engineers	VL 2 UE 1	Analysis II	HÜ 1	<b>Advanced Mechanical Engineering Design (part 1)</b> Advanced Mechanical Engineering Design I Advanced Mechanical Engineering Design I	VL 2 HÜ 2			<b>Material Science Laboratory</b> Companion Lecture for Materials Science Laboratory Material Science Laboratory	VL 2 PR 4
30			Analysis II	UE 1						
31										
32										
33										

Nontechnical Complementary Courses for Bachelors (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.