

# Course of Study Technomathematics (Study Cohort w22)

Sample course plan D Bachelor Technomathematics (TMBS) Dual study program

Specialisation I. Mathematics, Specialisation II. Informatics, Specialisation III. Engineering Science, Specialisation

Legend:

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

## IV<sub>p</sub> Subject Specific Focus

1	<b>Analysis for Technomathematicians (part 1)</b>	<b>Analysis for Technomathematicians (part 2)</b>	<b>Higher Analysis</b>	<b>Foundations of Management</b>	<b>Practical module 5 (dual study program, Bachelor's degree)</b>	<b>Numerical Algorithms in Structural Mechanics</b>	
2	Analysis I for Technomathematicians VL 4	Analysis II for Technomathematicians VL 4	Higher Analysis VL 4	Introduction to Management VL 3	Practical term 5 0	Numerical Algorithms in Structural Mechanics VL 2	
3	Analysis I for Technomathematicians GÜ 2	Analysis II for Technomathematicians GÜ 2	Higher Analysis GÜ 2	Management Tutorial GÜ 2		Numerical Algorithms in Structural Mechanics GÜ 2	
4							
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6							
7							
8				<b>Practical module 4 (dual study program, Bachelor's degree)</b>		<b>Seminar Technomathematics</b>	<b>Bachelor thesis (dual study program)</b>
9				Practical term 4 0		Seminar: Technomathematics SE 2	
10	<b>Linear Algebra for Technomathematicians (part 1)</b>	<b>Linear Algebra for Technomathematicians (part 2)</b>	<b>Numerical Mathematics</b>			<b>Hierarchical Algorithms</b>	
11	Linear Algebra 1 for Technomathematicians VL 4	Linear Algebra 2 for Technomathematicians VL 4	Numerical Mathematics VL 4		Hierarchical Algorithms VL 2		
12	Linear Algebra 1 for Technomathematicians GÜ 2	Linear Algebra 2 for Technomathematicians GÜ 2	Numerical Mathematics GÜ 2		Hierarchical Algorithms GÜ 2		
13				<b>Solvers for Sparse Linear Systems</b>			
14				Solvers for Sparse Linear Systems VL 2			
15				Solvers for Sparse Linear Systems GÜ 2			
16					<b>Matrix Algorithms</b>		
17					Matrix Algorithms VL 2		
18					Matrix Algorithms GÜ 2		
19	<b>Procedural Programming for Computer Engineers</b>	<b>Programming Paradigms</b>	<b>Mathematical Stochastics</b>	<b>Complex Analysis</b>			
20	Procedural Programming for Computer Engineers VL 2	Programming Paradigms VL 2	Mathematical Stochastics VL 4	Complex Analysis VL 4			
21	Procedural Programming for Computer Engineers HÜ 1	Programming Paradigms HÜ 1	Mathematical Stochastics GÜ 2	Complex Analysis GÜ 2			
22	Procedural Programming for Computer Engineers PR 2	Programming Paradigms PR 2					
23							
24					<b>Databases</b>		
25	<b>Practical module 1 (dual study program, Bachelor's degree)</b>	<b>Introduction to Electrical Engineering (Technomathematics)</b>			Databases VL 3		
26	Practical term 1 0	Introduction to Electrical Engineering VL 3			Databases - Exercise GÜ 2		
27		Introduction to Electrical Engineering GÜ 2					
28			<b>Proseminar Technomathematics</b>	<b>Automata Theory and Formal Languages</b>			
29			Proseminar Mathematics SE 2	Automata Theory and Formal Languages VL 2			
30				Automata Theory and Formal Languages GÜ 2			
31	<b>Introduction to Mechanics (Technomathematics)</b>	<b>Practical module 2 (dual study program, Bachelor's degree)</b>	<b>Practical module 3 (dual study program, Bachelor's degree)</b>				
32	Introduction to Mechanics VL 3	Practical term 2 0	Practical term 3 0				
33	Introduction to Mechanics GÜ 2						
34				<b>Software Engineering</b>			
35				Software Engineering VL 2			
36				Software Engineering GÜ 2			
37							
38							
39							
40				<b>Engineering Mechanics II (Elastostatics)</b>			
41				Engineering Mechanics II VL 2			
				Engineering Mechanics II GÜ 2			
				Engineering Mechanics II HÜ 2			
	Linking theory and practice (dual study program, Bachelor's degree) - 6LP						
	Technical Complementary Course I for Technomathematics (according to Subject Specific Regulations) - 6LP						
	Technical Complementary Course II for Technomathematics (according to Subject Specific Regulations) - 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.

