

# Course of Study Technomathematics (Study Cohort w20)

Sample course plan D Bachelor Technomathematics (TMBS)

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. Subject Specific Focus

LP	Subject	Form Hrs/wk	Semester 2	Form Hrs/wk	Semester 3	Form Hrs/wk	Semester 4	Form Hrs/wk	Semester 5	Form Hrs/wk	Semester 6	Form Hrs/wk
1	<b>Procedural Programming</b>		<b>Analysis for Technomathematicians (part 2)</b>		<b>Higher Analysis</b>		<b>Foundations of Management</b>		<b>Seminar Technomathematics</b>		<b>Numerical Algorithms in Structural Mechanics</b>	
2	Procedural Programming	VL 1	Analysis II for Technomathematicians	VL 4	Higher Analysis	VL 4	Introduction to Management	VL 3	Seminar: Technomathematics	SE 2	Numerical Algorithms in Structural Mechanics	VL 2
3	Procedural Programming	HÜ 1	Analysis II for Technomathematicians	UE 2	Higher Analysis	UE 2	Management Tutorial	UE 2			Numerical Algorithms in Structural Mechanics	UE 2
4	Procedural Programming	PR 2										
5												
6												
7	<b>Analysis for Technomathematicians (part 1)</b>						<b>Solvers for Sparse Linear Systems</b>		<b>Hierarchical Algorithms</b>		<b>Boundary Element Methods</b>	
8	Analysis I for Technomathematicians	VL 4					Solvers for Sparse Linear Systems	VL 2	Hierarchical Algorithms	VL 2	Boundary Element Methods	VL 2
9	Analysis I for Technomathematicians	UE 2					Solvers for Sparse Linear Systems	UE 2	Hierarchical Algorithms	UE 2	Boundary Element Methods	HÜ 2
10			<b>Linear Algebra for Technomathematicians (part 2)</b>		<b>Numerical Mathematics</b>							
11			Linear Algebra 2 for Technomathematicians	VL 4	Numerical Mathematics	VL 4						
12			Linear Algebra 2 for Technomathematicians	UE 2	Numerical Mathematics	UE 2						
13							<b>Automata Theory and Formal Languages</b>		<b>Matrix Algorithms</b>			
14							Automata Theory and Formal Languages	VL 2	Matrix Algorithms	VL 2		
15							Automata Theory and Formal Languages	UE 2	Matrix Algorithms	UE 2		
16	<b>Linear Algebra for Technomathematicians (part 1)</b>										<b>Bachelor Thesis</b>	
17	Linear Algebra 1 for Technomathematicians	VL 4										
18	Linear Algebra 1 for Technomathematicians	UE 2										
19			<b>Mechanics and object-oriented Programming for Technomathematicians (part 2)</b>		<b>Mathematical Stochastics</b>		<b>Software Engineering</b>		<b>Complex Analysis</b>			
20			Object-oriented modelling of elastic mechanical structures in C++	PBL 6	Mathematical Stochastics	VL 4	Software Engineering	VL 2	Complex Analysis	VL 4		
21					Mathematical Stochastics	UE 2	Software Engineering	UE 2	Complex Analysis	UE 2		
22												
23												
24												
25	<b>Mechanics and object-oriented Programming for Technomathematicians (part 1)</b>		<b>Introduction to Electrical Engineering (Technomathematics)</b>									
26	Mechanics for Technomathematicians	VL 3	Introduction to Electrical Engineering	VL 3								
27	Mechanics for Technomathematicians	UE 3	Introduction to Electrical Engineering	UE 2								
28					<b>Proseminar Technomathematics</b>							
29					Proseminar Mathematics	SE 2						
30												

Non-technical Courses for Bachelors (from catalogue) - 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.

