

# Course of Study Materials Science (Study Cohort w22)

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

Sample course plan B Master Materials Science (MAMS) Dual study program

## Specialisation Nano and Hybrid Materials

1	<b>Phenomena and Methods in Materials Science</b>		<b>Multiphase Materials</b>		<b>Advanced Functional Materials</b>		Master thesis (dual study program)
2	Phase equilibria and transformations	VL 2	Lecture: Multiscale Materials	VL 3	Advanced Functional Materials	SE 2	
3	Experimental Methods for the Characterization of Materials	VL 2	Polymer Composites	VL 3			
4	Übung zu Phänomene und Methoden der Materialwissenschaft	HÜ 2					
5							
6							
7	<b>Materials Physics and Atomistic Materials Modeling</b>		<b>Advanced Laboratory Materials Sciences</b>		<b>Study work on Modern Issues in the Materials Sciences</b>		
8	Materials Physics	VL 2	Advanced Laboratory Materials Sciences	PR 6			
9	Quantum Mechanics and Atomistic Materials Modeling	VL 2					
10	Exercises in Materials Physics and Modeling	GÜ 2					
11							
12							
13	<b>Applied Computational Methods for Material Science</b>		<b>Mechanical Properties</b>				
14	Applied Computational Methods for Material Science	PBL 3	Mechanical Behaviour of Brittle Materials	VL 2			
15			Dislocation Theory of Plasticity	VL 2			
16							
17							
18							
19	<b>Practical module 1 (dual study program, Master's degree)</b>		<b>Practical module 2 (dual study program, Master's degree)</b>		<b>Practical module 3 (dual study program, Master's degree)</b>		
20	Practical term 1	0	Practical term 2	0	Practical term 3	0	
21							
22							
23							
24							
25							
26							
27							
28							
29	<b>BIO II: Biomaterials</b>		<b>Interfaces and interface-dominated Materials (part 1)</b>		<b>Interfaces and interface-dominated Materials (part 2)</b>		
30	Biomaterials	VL 2	Interfaces	VL 2	Nature's Hierarchical Materials	SE 2	
31							
32			<b>Quantum Mechanics of Solids</b>		<b>Particle Technology and Solid Matter Process Technology</b>		
33			Quantum Mechanics of Solids	VL 2	Advanced Particle Technology II	VL 2	
34			Quantum Mechanics of Solids	GÜ 1	Advanced Particle Technology II	PBL 1	
35					Experimental Course Particle Technology	PR 3	
36							
37							
38			<b>BIO II: Artificial Joint Replacement</b>				
39			Artificial Joint Replacement	VL 2			
40							
Business & Management (from catalogue) - 6LP							
Linking theory and practice (dual study program, Master'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.

