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 A Master Materials Science (MAMS) Dual study program

Specialisation Modeling

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1	**Phenomena and Methods in Materials Science**	**Multiphase Materials**	**Advanced Functional Materials**	**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			
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7	**Materials Physics and Atomistic Materials Modeling**	**Advanced Laboratory Materials Sciences**	**Study work on Modern Issues in the Materials Sciences**	
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			
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13	**Applied Computational Methods for Material Science**	**Mechanical Properties**		
14	Applied Computational Methods for Material Science PBL 3	Mechanical Behaviour of Brittle Materials VL 2		
15		Dislocation Theory of Plasticity VL 2		
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19	**Practical module 1 (dual study program, Master's degree)**	**Practical module 2 (dual study program, Master's degree)**	**Practical module 3 (dual study program, Master's degree)**	
20	Practical term 1 0	Practical term 2 0	Practical term 3 0	
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29	**Materials Modeling**	**Quantum Mechanics of Solids**	**Nonlinear Structural Analysis**	
30	Material Modeling VL 2	Quantum Mechanics of Solids VL 2	Nonlinear Structural Analysis VL 3	
31	Material Modeling GÜ 2	Quantum Mechanics of Solids GÜ 1	Nonlinear Structural Analysis GÜ 1	
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35			**Continuum Mechanics**	
36			Continuum Mechanics VL 2	
37			Continuum Mechanics Exercise GÜ 2	
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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.