Modul-Nr.	Modulinhalt	Semester	Umfang	Pflicht/ Wahlpflicht	Arbeitszeit [h]	V	Ü	P	Nachbear-beitung	Summe	Σ LP
1	*Fundamentals of Materials Science*				*180*						*6,0*
	Fundamental Concepts of Materials Science	1. FS	V 3	P	45 + 90	45			90	180	
	Fundamental Concepts of Materials Science (Übung)	1. FS	Ü 1	P	15 + 30		15		30		
2	*Atomistic Materials Modeling*				*180*						*6,0*
	Atomistic Materials Modeling	1. FS	V 2	P	30 + 60	30			60	180	
	Atomistic Materials Modelling (Übung)	1. FS	Ü 2	P	30 + 60		30		60		
3	*Physics and Technology of Nanomaterials*				150						*5,0*
	Physics & Technology of Nanomaterials	1. FS	V 2	P	30 + 60	30			60	150	
	Physics & Technology of Nanomaterials (Übung)	1. FS	Ü 2	P	30 + 30		30		30		
4	*Materials Analysis*				150						*5,0*
	Characterization Techniques of Solids	1. FS	V 2	P	30 + 75	30			75	150	
	Characterization Techniques of Solids (Übung)	1. FS	Ü 1	P	15 + 30		15		30		
5	*Functional Materials*				180						*6,0*
a	Macromolecular Chemistry / Structure-Property-Relations	1. FS	V 2	P	30 + 60	30			60	90	
b	Natural and synthetic functional Materials	2. FS	V 2	P	30 + 60	30			60	90	
6	*Laboratory Course on Materials Physics and Analysis*				150						*5,0*
	Materials Physics and Analysis	2. FS	P 3	P	45 + 105			45	105	150	

7	*Surfaces & Interfaces*				150						*5,0*
	Fundamentals and Applications of Surface and Interface Spectroscopy	2. FS	V 2	P	30 + 75	30			75	150	
	Fundamentals and Appl. of Surface and Interface Spectroscopy(Übung)	2. FS	Ü 1	P	15 + 30		15		30		
8	*Laboratory Course on Materials Chemistry and Analysis*				150						*5,0*
	Materials Chemistry and Analysis	3. FS	P 3	P	45 + 105			45	105	150	
9	*Project based Course*				240						*8,0*
a	Current Topics in Materials Science	3. FS	S 2	P	30 + 60		30		60	90	
b	Project based Course	3. FS	P 5	P	75 + 75			75	75	150	
10	*General Studies*				150						*5,0*
	General Studies	3. FS	V 2	P	30 + 60	30			60	90	
	General Studies (Übung)	3. FS	Ü 2	P	30 + 30		30		30	60	
11	*Master Thesis*				900						*30,0*
a	Master Thesist	4. FS	P 20	P	300 + 420			300	420	720	
b	Concluding colloquium	4. FS	S 2	P	30 + 150		30		150	180	

Wahlpflichtbereich

12	*Interface Electrochemistry*				150						*5,0*
	Structure and Dynamics at Materials Interfaces and Nanostructures	1. FS	V 2	WP	30 + 75	30			75	150	
	Structure and Dynamics at Materials Interfaces and Nanostructures (Übung)	1. FS	Ü 1	WP	15 + 30		15		30		
13	*Polymer Analysis*				150						*5,0*
	Polymer Analysis	1. FS	V 2	WP	30 + 75	30			75	150	
	Polymer Analysis (Übung)	1. FS	Ü 1	WP	15 + 30		15		30		
14	*Quantum Chemistry*				150						*5,0*
	Quantum Chemistry	1. FS	V 2	WP	30 + 60	30			60	150	
	Quantum Chemistry (Übung)	1. FS	Ü 1	WP	15 + 45		15		45		
15	*Biomaterials*				180						*6,0*
a	Biopolymers and Biointerfaces	1. FS	V 2	WP	30 + 60	30			60	90	
b	Bioinspired Materials	1. FS	V 2	WP	30 + 60	30			60	90	
16	*Computational Spectroscopy*				180						*6,0*
	Computational Spectroscopy	2. FS	V 2	WP	30 + 60	30			60	180	
	Computational Spectroscopy (Übung)	2. FS	Ü 2	WP	30 + 60		30		60		
17	*Semiconductor Epitaxy*				180						*6,0*
	Semiconductor Epitaxy	2. FS	V 2	WP	30 + 60	30			60	180	
	Semiconductor Epitaxy (Übung)	2. FS	Ü 2	WP	30 + 60		30		60		

18	*Semiconductor Processing*				180						*6,0*
	Processing of Semiconductors	2. FS	V 2	WP	30 + 60	30			60	180	
	Processing of Semiconductors (Übung)	2. FS	Ü 2	WP	30 + 60		30		60		
19	*Solid-State Materials Chemistry*				180						*6,0*
	Inorganic Materials Chemistry	2. FS	V 2	WP	30 + 90	30			90	180	
	Inorganic Materials Chemistry (Übung)	2. FS	Ü 1	WP	15 + 45		15		45		
20	*Finite Elemente Modeling*				180						*6,0*
	Simulation of Materials	2. FS	V 2	WP	30 + 90	30			90	180	
	Simulation of Materials (Übung)	2. FS	Ü 1	WP	15 + 45		15		45		
21	*Advanced Materials Analysis*				180						*6,0*
a	NMR in Materials Science	2. FS	V 2	WP	30 + 60	30			60	90	
b	Synchrotron Techniques for Materials Science	2. FS	V 2	WP	30 + 60	30			60	90	
22	*Soft Matter*				180						*6,0*
a	Special Polymer Synthesis	2. FS	V 2	WP	30 + 60	30			60	90	
b	Liquid Crystals	3. FS	V 2	WP	30 + 60	30			60	90	
23	*Micro Electromechanical Systems*				180						*6,0*
	Micro Electromechanical Systems	3. FS	V 2	WP	30 + 60	30			60	150	
	Micro Electromechanical Systems (Übung)	3. FS	Ü 2	WP	30 + 60		30		30		
24	*Molecular Thermodynamics*				150						*5,0*

	Molecular Thermodynamics	3. FS	V 2	WP	30 + 60	30			60	150	
	Molecular Thermodynamics (Übung)	3. FS	Ü 1	WP	15 + 45		15		45		
25	*Advanced Electron Microscopy*				180						*6,0*
	Microscopy and Spectroscopy with Electrons	3. FS	V 2	WP	30 + 60	30			60	180	
	Microscopy and Spectroscopy with Electrons (Übung)	3. FS	Ü 2	WP	30 + 60		30		60		
26	*Particle Synthesis*				150						*5,0*
	Particle Synthesis	3. FS	V 2	WP	30 + 60	30			60	150	
	Particle Synthesis (Übung)	3. FS	Ü 1	WP	15 + 45		15		45		
27	*Ion Beam Analysis of Materials*				180						*6,0*
	Ion Beam Analysis of Materials	3. FS	V 1	WP	15 + 30	15			30	60	
	Ion Beam Analysis of Materials	3. FS	P 2	WP	30 + 60			30	60	90	
	Ion Beam Analysis of Materials	3. FS	S 1	WP	15 + 30		15		30	30	