

Course of Study Materials Science (Study Cohort w18)

Sample course plan B Master Materials Science (MAMS)
Specialisation Nano and Hybrid Materials

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

LP	Semester 1	Form Hrs/wk	Semester 2	Form Hrs/wk	Semester 3	Form Hrs/wk	Semester 4	Form Hrs/wk									
1	Multiphase Materials		Phenomena and Methods in Materials Science		Advanced Functional Materials		Master Thesis										
2									Applied Computational Methods for Material Science	PBL	3	Phase equilibria and transformations	VL	2	Advanced Functional Materials	SE	2
3												Experimental Methods for the Characterization of Materials	VL	2			
4									Polymer Composites	VL	2						
5																	
6																	
7	Materials Physics and Atomistic Materials Modeling		Advanced Laboratory Materials Sciences		Study work on Modern Issues in the Materials Sciences												
8																	
9									Materials Physics	VL	2	Advanced Laboratory Materials Sciences	PR	6			
10									Atomistic Materials Modeling	VL	2						
11	Exercises in Materials Physics and Modeling	UE	2														
12																	
13	Lecture: Multiscale Materials		Mechanical Properties														
14																	
15									Multiscale Materials	VL	6	Mechanical Behaviour of Brittle Materials	VL	2			
16												Dislocation Theory of Plasticity	VL	2			
17																	
18																	
19	BIO II: Biomaterials		Interfaces and interface-dominated Materials (part 1)		Interfaces and interface-dominated Materials (part 2)												
20																	
21	Biomaterials	VL	2	Interfaces	VL	2			Nature's Hierarchical Materials	SE	2						
22																	
23				Quantum Mechanics of Solids					Particle Technology and Solid Matter Process Technology								
24				Quantum Mechanics of Solids	VL	2			Advanced Particle Technology II	VL	2						
25				Quantum Mechanics of Solids	UE	1			Advanced Particle Technology II	PBL	1						
26									Experimental Course Particle Technology	PR	3						
27																	
28																	
29				BIO II: Artificial Joint Replacement													
30				Artificial Joint Replacement	VL	2											
Business & Management (from catalogue) - 6LP																	
Nontechnical Elective Complementary Courses for Master (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.

