

# Course of Study Materials Science (Study Cohort w15)

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

Legend:

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

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

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.