

## ADVANCED MATERIALS

## Curriculum Biomaterials

1 <sup>st</sup> semester	CP	SWS	2 <sup>nd</sup> semester	CP	SWS	3 <sup>rd</sup> semester	CP	SWS	4 <sup>th</sup> semester	CP	SWS
Materials Science I	10 CP	8 h	Materials Science II	10 CP	8 h						
Chemistry	8 CP	7 h	Chemistry	3 CP	2 h						
Physics	5 CP	4 h	Physics	4 CP	3 h						
Biology and Cell Biology	5 CP	4 h									
			Biomaterials I	5 CP	4 h	Biomaterials II	8 CP	7 h			
			Elective Courses in Nano- / Biomaterials	11 CP	4 h	Elective Courses in Nano- / Biomaterials	13 CP	7 h			
German Language I	3 CP	4 h	German Language II	3 CP	4 h	German Language III	2 CP	2 h			
									Master Thesis	30 CP	40 h
Sum Compulsories	31 CP	27 h		25 CP	18 h		10 CP	10 h		30 CP	40 h
Sum Comp. & Elect.	31 CP	27 h		36 CP	22 h		23 CP	17 h		30 CP	40 h

### Offered Elective Courses 2nd sem.

### Offered Elective Courses 3rd sem.

Basics of TEM	Applications of TEM
Cell Interactions with Biomaterials and Imaging Techniques	Biosensors
Colloids	Cell Mechanics and Interactions with Biomaterials
Compound semiconductors	Exploring the Nanoworld with X-Rays & High Energy Electrons
Mechanics of Materials	Innovation Management for Nanotechnology
Micro- and Nanostructured Optics	Laser, Laser-Matter Interactions
Sensors and Actuators	Materials in Cell and Tissue
	Physics of Scattering
	Polymers in Medicine
	Surface Plasmon Photonics
	Theory in Polymer Physics
	Thin Films