

MSc Nanobiophysics
Nanoscience and Nanotechnology - 1st year KUL, 2nd year TUD
 valid from winter term 2010/11



	Title of module	responsible	SWS	type of course	Title of lectures (teacher)	
1/2 semester	for a description of the courses at KU Leuven please see http://www.emm-nano.org/Program/programmeDetails.htm					
3. Semester	Option Biophysics (major/compulsory modules)					
	Lab Rotation Biophysics	Biophys. Teachers	6	lab course		6
	Molecular Biophysics	Schwille	2	lecture	Cellular Machines: Fundamentals and Applications of Biomolecular Mechanosystems (Diez)	9
			2	exercise		
			1	lab course		
			2	lecture	Biophysical Methods (Schwille)	
			2	seminar		
			1	lab course		
	Option Nanoelectronics (major/compulsory modules)					
	Molecular Electronics	Cuniberti	2	lecture	Current Topics in Materials Science	9
			2	exercise		
			2	seminar		
	Nanooptics and Molecular Magnetism	Eng/Büchner	2	lecture	Nanooptics	6
			2	lecture	Molecular Magnetism	
	Molecular Biophysics	Schwille	2	lecture	Biophysical Methods (Schwille)	9
			2	seminar		
			1	lab course		
			2	lecture	Cellular Machines: Fundamentals and Applications of Biomolecular Mechanosystems (Diez)	
			1	lab course		
	Biological oriented module (6 ECTS, choose 2 of 6)					
	Introduction to Genomics	Stewart	2	lecture		6
	Introduction to Proteomics	Hoflack	2	lecture		
	Surface Chemistry	Werner	2	lecture		
	Protein Engineering	Hoflack	2	lecture		
	Systems Biology	Howard/Schroeder/Jü	2	lecture		
	Developmental Biology	Brand	2	lecture		
	Electives for Option Biophysics - choose 3					
	Applied Bioinformatics	Schroeder	2	lecture		
	Elements of Nanobiotechnology	Mertig	2	lecture		
	Cellular Machines: Molecular Motors	Diez	2	lecture		
	Physics and Phys. Chemistry of Micro-/Nanotech. Devices	HG Braun	2	lecture		
	Microsystems Technology	HG Braun	2	lecture		

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	Nanooptics	Eng	2	lecture		
	Molecular Magnetism	Büchner	2	lecture		
	Biomedical Tissue Engineering	Corbeil	2	lecture		
	Stem Cell Engineering	Stewart	2	lecture		
	Advanced Polymeric Biomaterials	Werner	2	lecture		
	Molecular electronics	Cuniberti	2	lecture		
	Current topics in Materials Science	Cuniberti	2	seminar		
	Public and Economic Aspects	U Braun	2	lecture		9
			26-30		total ECTS:	30
4. Semester	Master's Thesis					30
					total ECTS:	30