

BSc & MSc Nanobiology - TU Delft Courses for Exchange Students

An exchange in Nanobiology allows you the freedom to design a personalized course package. However, this may mean that there is overlap between courses, especially if your package includes courses from different years within the programme or electives from other programmes.

The Nanobiology courses take place either at TU Delft or Erasmus Medical Center (about a 30-minute train ride or 1-hour bike ride apart), this is also something to consider when selecting courses. We highly recommend that you discuss your course selection with the programme coordinator or academic counsellor, they can help make your plan more successful.

Please read the courses' pre-requisites [here](#) in order to determine whether the courses you select are a good fit for your educational background.

MSc Nanobiology Elective Courses 2023 - 2024 (compose a package of 30 EC)						
Course code	Course Name	Credits (EC)	Period			
			Q1	Q2	Q3	Q4
Core Nanobiology Courses						
NB4011	Analytical Mechanics	3				
NB4012	Stochastic Processes with Applications	3				
NB4020	High-Resolution Imaging	4				
NB4030	Engineering Genetic Information	3				
NB4040	Biology of Cancer	4				
NB4050	Modeling Dynamical Systems	3				
NB4070	Soft Matter	6				
AP3163	Physics of Biological Systems	6				
Nanobiology Electives						
NB4080	Protein Quality Control Mechanisms	3				
NB4090	Stem Cells	3				
NB4100	Nuclear Architecture	3				
NB4110	Geometry of Physics	6				
NB4120	Biological Networks; a Data Driven Approach to Discovery and Understanding	3				
NB4160	Engineering of Living Systems	3				
NB4166	Molecular Virology and Immunology	3				
Nanobiology Electives from Other Programmes						
AP3021	Advanced Statistical Mechanics	6				
AP3032	Continuum Physics	6				
AP3132	Advanced Digital Image Processing	6				
AP3232	Medical Imaging Signals and Systems	6				
AP3371	Radiological Health Physics	6				
AP3582	Medical Physics of Photon and Proton Therapy	6				
AP3831	Systems Engineering for Physicists	3				
BM41035	Biomaterials	4				
BM41050	Applied Experimental Methods: Medical Instruments	4				
BM41075	Regenerative Medicine	4				
BM41090	Computational Mechanics of Tissues and Cells	6				
BM41155	3D Printing	4				
CH3142	Molecular Thermodynamics	5				
CH3372A	Soft Matter for Chemical Products	3				
CH3681A	Reactors and Kinetics	6				
CS4220	Machine Learning 1	5				

NB2071	Physical Biology of the Cell 2	3								
NB2141	Physics 2	3								
NB2214	Electronic Instrumentation	6								
NB2230	Biomolecular Structures and Functions	3								
TN2545	Systems and Signals	6								

BSc Nanobiology Courses Spring Semester 2023 (compose a package of 30 EC)										
Course Code	Course name	Credits (EC)	Quarters							
			1A	1B	2A	2B	3A	3B	4A	4B
NB1016	Molecular Biology	3								
NB1052	Journal Club 1	3								
NB1072	Physical Biology of the Cell 1	3								
NB1163	Lab Course Track B-1*	3								
NB1120	Biomolecular Programming	3								
NB1132	Biophysics	3								
NB1143	Physics 1B	3								
NB1211	Analysis 3	3								
NB1230	Linear Algebra	3								
NB2032	Evolutionary & Developmental biology	6								
NB2041	Optics and Microscopy	3								
NB2046	Microscopy / Nanoscopy Practical*	1,5								
NB2081	Nanotechnology*	2								
NB2121	Image Analysis	3								
NB2151	Journal Club 2	1								
NB2161	Bioinformatics	4,5								
NB2181	Computational science	3								
NB2220	Statistical Physics	3								
NB3011	Nanomedicine**	2,5								
NB3014	Computational Neuroscience	2,5								
NB3015	A Primer in Neuroscience	2,5								
NB3017	Quantum Mechanics for Nanobiology 1	2,5								
NB3018	Quantum Mechanics for Nanobiology 2	2,5								
NB3019	Molecular Motors	2,5								
NB3020	Genomics Technology in Breast Cancer Research***	2,5								
NB3021	Optics and its Application in Nanobiology	2,5								
NB3022	Epigenetics	2,5								
NB3023	Human Complex Genetics	2,5								
NB3024	Advanced Math Topics	2,5								

* Limited enrolment courses, please enquire with the programme coordinator about availability.

** NB3011 Nanomedicine is offered 3 times per year, requires advance enrolment, limited availability.

*** NB3020 Genomics Technology in Breast Cancer Research is offered 2 times per year, requires advance enrolment, limited availability.

Please note that it is **not** possible to do a research project in the BSc and MSc Nanobiology programme due to limited capacity in the research departments.

Please note that the course offerings, study guides and time schedules may be subject to changes for the academic year 2023-2024.

For more information about the study programmes see [BSc Nanobiology](#) and/or [MSc Nanobiology](#).

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