

Table 1. Track Bioengineering Technologies

	Course	1A	1B	2A	2B
1	<a href="#">201400285 Biostatistics</a>		■		
2	<a href="#">201500222 Technology for Health</a>	■			
3	<a href="#">201900088 Applied Cell biology</a>		■		
4	<a href="#">201400284 Biomedical Membranes &amp; Artificial Organs</a>			■	
5	<a href="#">201600327 Tissue Engineering</a>				■
6	<a href="#">201900123 Advanced Organic Chemistry</a>			■	
6	<a href="#">201700040 In Vitro Diagnostics</a>	■			
7	<a href="#">193740010 Controlled Drug and Gene Delivery</a>	■			
8	<a href="#">193640020 Biophysical Techniques &amp; Molecular Imaging</a>	■			
9	<a href="#">201400283 Biomedical Materials Engineering</a>		■		
10	<a href="#">201200220 Nanomedicine</a>		■		
11	<a href="#">202001414 Physical Biology</a>	■			
12	<a href="#">191211120 Lab-on-a-chip</a> (don't sign up if you already completed <a href="#">201500054</a> )		■		
13	<a href="#">193400111 Bionanotechnology</a>			■	■
14	<a href="#">193700050 AMM-project Organic Materials</a>			■	
15	<a href="#">191210720 Biomedical Signal Acquisition</a>			■	
16	<a href="#">193640050 Clinical Chemistry</a>				■
17	<a href="#">200900040 Topics in Human Anatomy &amp; Sports Physiology</a>				■
18	<a href="#">201800288 Introduction to Bioengineering Technologies</a> (note: only for students who didn't follow B-BMT)	■			



Compulsory



Elective




Pre-approved elective

Table 2. Track Imaging and In Vitro Diagnostics

	Course	1A	1B	2A	2B
1	<a href="#">201700040 In Vitro Diagnostics</a>	Compulsory			
2	<a href="#">201400285 Biostatistics</a>		Compulsory		
3	<a href="#">193640020 Biophysical Techniques &amp; Molecular Imaging</a>	Compulsory			
4	<a href="#">201800114 Imaging Technology in Radiology</a>				Compulsory
5	<a href="#">201500222 Technology for Health</a>	Compulsory			
6	<a href="#">191506001 Mathematical Methods</a>		Compulsory		
7	<a href="#">201900044 Radiation Protection Expertise</a>	Elective	Elective		
8	<a href="#">193572010 Physics of Bubbles</a>		Elective		
9	<a href="#">191551150 Numerical Techniques for PDE</a>		Elective		
10	<a href="#">193542070 Medical Acoustics</a>				Elective
11	<a href="#">201900260 Magnetic Methods in Medicine</a>			Elective	
12	<a href="#">193810020 Advanced Techniques for Signal Analysis</a>			Elective	
13	<a href="#">191210910 Image Processing and Computer Vision</a>			Elective	
14	<a href="#">193500000 Biomedical Optics</a>				Elective
15	<a href="#">202100107 Deep Learning for 3D Medical Image Analysis</a>				Pre-approved elective

 Compulsory


 Elective

 Pre-approved elective

Table 3. Track Physiological Signals and Systems

	Course	1A	1B	2A	2B
1	<a href="#">201500222 Technology for Health</a>				
2	<a href="#">201400285 Biostatistics</a>				
3	<a href="#">201400286 Clinical Research Methods</a>				
4	<a href="#">193810020 Advanced Techniques for Signal Analysis</a>				
5	<a href="#">191150700 Integrative Design of Biomedical Products</a>				
6	<a href="#">201700071 Identification of Human Physiological Systems</a>				
7	<a href="#">193810010 Biological Control Systems</a>				
8	<a href="#">201800156 Biomechanics of human movement</a>				
9	<a href="#">191210720 Biomedical Signal Acquisition</a>				
10	<a href="#">201400282 Bioelectromagnetics</a>				
11	<a href="#">191150480 Human Movement Control</a>				
12	<a href="#">201600028 Telemedicine and Data Analysis for Monitoring</a>				
13	<a href="#">193810100 Dynamic Behavior of Neuronal Networks</a>				
14	<a href="#">191506001 Mathematical Methods</a>				
15	<a href="#">191560430 Nonlinear Dynamics</a>				
16	<a href="#">191210920 Optimal Estimation in Dynamic Systems</a>				
17	<a href="#">191131700 System Identification and Parameter Estimation</a>				
18	<a href="#">201600070 Machine Learning I</a>				
19	<a href="#">191154740 Biophysical Fluid Dynamics: The Respiratory System</a>				
20	Technology for assessment of performance in sports-not given in 2021-2022				

 Compulsory


 Elective

 Pre-approved elective

Table 4. Track Medical Device Design


















	Course	1A	1B	2A	2B
1	<a href="#">191150700 Integrative Design of Biomedical Products</a>				
2	<a href="#">201400286 Clinical Research Methods</a>				
3	<a href="#">201400285 Biostatistics</a>				
4	<a href="#">201500222 Technology for Health</a>				
5	<a href="#">201400287 Ergonomics</a> Not given in 2021-2022				
6	<a href="#">201800156 Biomechanics of Human Movement</a>				
7	<a href="#">200900040 Topics in Human Anatomy &amp; Sports Physiology</a> .....				
8	<a href="#">202000255 Advanced Control Engineering</a>				
9	<a href="#">191211060 Modern Robotics</a>				
10	<a href="#">201400283 Biomedical Materials Engineering</a>				
11	<a href="#">202001409 Development of Artificial Internal Organs</a>				
12	<a href="#">201300004 Robotics for Medical Applications</a>				
13	<a href="#">191150480 Human Movement Control</a>				
14	<a href="#">201400046 Experimental Methods</a>				
15	<a href="#">191121720 Design, Production and Materials</a>				
16	<a href="#">201400048 Moulding Technology</a>				
17	<a href="#">191210910 Image Processing and Computer Vision</a>				
18	<a href="#">191131360 Design Principles for Precision Mechanisms 2</a>				
19	<a href="#">201700294 Engineering Project Management</a>				
20	<a href="#">191211080 System Engineering</a>				
21	<a href="#">202000040 Introduction to Robotics Design</a>				
22	<a href="#">201400103 3D Printing; Processes and Use</a>				
23	<a href="#">202001580 Early HTA during Medical Device Development</a>				

 Compulsory


 Elective

 Pre-approved elective

Table 5. Track Biorobotics

	Course	1A	1B	2A	2B
1	<a href="#">201400285 Biostatistics</a>				
2	<a href="#">201300004 Robotics for Medical Applications</a>				
3	<a href="#">201500222 Technology for Health</a>				
4	<a href="#">202000255 Advanced Control Engineering</a>				
5	<a href="#">201800335 Programming 2</a>				
6	<a href="#">191211060 Modern Robotics</a>				
7	<a href="#">201700071 Identification of Human Physiological Systems</a>				
8	<a href="#">201200133 Biomechatronics</a>				
9	<a href="#">191210910 Image Processing and Computer Vision</a>				
10	<a href="#">191561620 Optimal Control</a>				
11	<a href="#">201600070 Machine Learning I</a>				
12	<a href="#">201900037 Flexible Multibody Dynamics</a>				
13	<a href="#">191150480 Human Movement Control</a>				
14	<a href="#">201800156 Biomechanics of Human Movement</a>				
15	<a href="#">201400286 Clinical Research Methods</a>				
16	<a href="#">191150700 Integrative Design of Biomedical Products</a>				
17	<a href="#">193810020 Advanced Techniques for Signal Analysis</a>				

 Compulsory

 Elective

 Pre-approved elective

## Pre-approved free electives

These courses are part of all the BME tracks or other MSc programmes. Always check your eligibility and entry requirements in Osiris before choosing these courses as free electives.

Table 6. Quartile 1

	Course	1A	1B	2A	2B
201400103	<a href="#">3D Printing; Processes And Use</a>	■			
201800083	<a href="#">Advanced Colloids &amp; Interfaces</a> you can't choose this course if you participated in the minor Soft and Biological Physics	■			
201600070	<a href="#">Machine Learning I</a>	■			
193810010	<a href="#">Biological Control Systems</a>	■			
191154740	<a href="#">Biophysical Fluid Dynamics: The Respiratory System</a>	■			
193640020	<a href="#">Biophysical Techniques &amp; Molecular Imaging</a>	■			
201400286	<a href="#">Clinical Research Methods</a>	■			
201900093	<a href="#">Control System Design for Mechatronics</a>	■			
193740010	<a href="#">Controlled Drug and Gene Delivery</a>	■			
201400584	<a href="#">Design of Persuasive Health Technology</a>	■		■	
201900074	<a href="#">Fundamentals of Numerical Methods</a>	■	■		
201200167	<a href="#">Imaging Techniques</a>	■	■		
201700040	<a href="#">In Vitro Diagnostics</a>	■			
191150700	<a href="#">Integrative Design of Biomedical Products</a>	■			
201200146	<a href="#">Maintenance Engineering &amp; Management</a>	■			
191560430	<a href="#">Nonlinear Dynamics</a>	■			
202001414	<a href="#">Physical Biology</a>	■			
191158510	<a href="#">Programming in Engineering</a>	■			
201900044	<a href="#">Radiation Protection Expertise</a>	■	■		
191820210	<a href="#">Simulation</a>	■			

Courses in 2 quartiles have a spread studyload (e.g. 2,5EC each quartile, 5EC total)

Table 7. Quartile 2

	Course	1A	1B	2A	2B
201600071	<a href="#">Machine Learning II</a>				
201900091	<a href="#">Advanced Topics in Finite Element Methods</a>				
191158500	<a href="#">Advanced Programming in Engineering</a>				
201900088	<a href="#">Applied Cell biology</a>				
201400283	<a href="#">Biomedical Materials Engineering</a>				
201400174	<a href="#">Data Science</a>				
201800177	<a href="#">Deep Learning - From Theory to Practice</a>				
201400287	<a href="#">Ergonomics</a> not given in 2021-2022				
191210001	<a href="#">Instrumentation for Embedded Systems</a>				
191211120	<a href="#">Lab-on-a-chip</a>				
191506001	<a href="#">Mathematical Methods</a>				
201200220	<a href="#">Nanomedicine</a>				
191551150	<a href="#">Numerical Techniques for PDE</a>				
191561620	<a href="#">Optimal Control</a>				
191210920	<a href="#">Optimal Estimation in Dynamic Systems</a>				
193572010	<a href="#">Physics of Bubbles</a>				
191211090	<a href="#">Real-Time Software Development</a>				
201300004	<a href="#">Robotics for Medical Applications</a>				
201600028	<a href="#">Telemedicine and Data Analysis</a>				

*Courses in 2 quartiles have a spread studyload (e.g. 2,5EC each quartile, 5EC total)*

Table 8. Quartile 3

	Course	1A	1B	2A	2B
201900123	<a href="#">Advanced organic chemistry</a>				
193810020	<a href="#">Advanced Techniques for Signal Analysis</a>				
193700050	<a href="#">AMM-Project Organic Materials</a>				
201800156	<a href="#">Biomechanics of Human Movement</a>				
201400284	<a href="#">Biomedical Membranes &amp; Artificial Organs</a>				
191210720	<a href="#">Biomedical Signal Acquisition</a>				
193400111	<a href="#">Bionanotechnology</a>				
201400584	<a href="#">Design of Persuasive Health Technology</a>				
191131360	<a href="#">Design Principles for Precision Mechanisms 2</a>				
201000159	<a href="#">Durability of Consumer Products</a>				
193580020	<a href="#">Experimental Techniques in Physics of Fluids</a>				
201400046	<a href="#">Experimental Methods</a>				
191150480	<a href="#">Human Movement Control</a>				
191210910	<a href="#">Image Processing and Computer Vision</a>				
201900260	<a href="#">Magnetic Methods for Imaging</a>				
193542070	<a href="#">Medical Acoustics</a>				
193400121	<a href="#">Nano-Fluidics</a>				
194121020	<a href="#">Optimization of Healthcare Processes</a>				
201800335	<a href="#">Programming 2</a>				
191551200	<a href="#">Scientific Computing</a>				
191131700	<a href="#">System Identification and Parameter Estimation</a>				
191155730	<a href="#">Tribology</a>				

Courses in 2 quartiles have a spread studyload (e.g. 2,5EC each quartile, 5EC total)



Table 9. Quartile 4

	Course	1A	1B	2A	2B
201100254	<a href="#">Advanced Computer Vision and Pattern Recognition</a>				
201400282	<a href="#">Bioelectromagnetics</a>				
201200133	<a href="#">Biomechanics</a>				
193500000	<a href="#">Biomedical Optics</a>				
193640050	<a href="#">Clinical Chemistry</a> (max. 15 participants)				
193810100	<a href="#">Dynamic Behaviour of Neuronal Networks</a>				
192360501	<a href="#">E-health Strategies</a>				
201700071	<a href="#">Identification of Human Physiological Systems</a>				
201800114	<a href="#">Imaging Technology in Radiology</a>				
191211110	<a href="#">Modelling and Simulation</a>				
201400048	<a href="#">Moulding Technology</a>				
193730040	<a href="#">Polymers and Material Science Practice</a>				
201000262	<a href="#">Surgical Navigation Technology</a>				
191622510	<a href="#">Technology and Social Order</a>				
191571090	<a href="#">Time Series Analysis</a>				
201600327	<a href="#">Tissue Engineering</a>				
200900040	<a href="#">Topics in Human Anatomy &amp; Sports Physiology</a>				
202001580	<a href="#">Early HTA during Med. Device Development</a>				
T.B.D.	Technology for assessment of performance in sports not given in 2021-2022				
202100107	<a href="#">Deep Learning for 3D Medical Image Analysis</a>				

Table 10. Capita Selecta

	Course	1A	1B	2A	2B
193640010	<a href="#">Capita Selecta BME</a>				
201400267	<a href="#">Capita Selecta BW</a>				
201800207	<a href="#">Capita Selecta RAM</a>				
201400270	<a href="#">Capita Selecta BIOS</a>				
201400269	<a href="#">Capita Selecta BSS</a>				
(code t.b.a.)	Capita Selecta AST				
201400268	<a href="#">Capita Selecta BMPI</a>				
201400266	<a href="#">Capita Selecta BST</a>				
201400271	<a href="#">Capita Selecta CNPH</a>				
201400272	<a href="#">Capita Selecta DBE</a>				
201400275	<a href="#">Capita Selecta NBP</a>				
201400273	<a href="#">Capita Selecta MCBP</a>				
201400274	<a href="#">Capita Selecta MTG</a>				
201400276	<a href="#">Capita Selecta NIM</a>				
201600219	<a href="#">Capita Selecta POF</a>				
202001596	<a href="#">Capita Selecta BioEE</a>				