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MSBME Study Path (2024 Cohort)

Full-time Normal Study Path via **Taught Courses** (1 Year)

Yr.	Sem.		Con	ırses	,	CUs			
		Elective courses for selection [®] :							
		Biomedical Imaging and Bioinstrumentation Cell/Tissue Engineering and Biomechanics		Robotics and AI for Biomedical Applications	Biosensors and Health Informatics				
	A	- BME5110 Biomedical Engineering Design - BME6111 Biomedical Instrumentation	- BME5111 Regenerative Medicine - BME6101 Manufacturing of Biomedical Devices	- BME6114 Advanced Control Systems	- BME6123 Flexible Bioelectronics for Medical Applications - BME6136 Advanced Biomaterials for Healthcare and Biomedical Applications	15			
		Elective courses for selection [@] :							
1		Biomedical Imaging and Bioinstrumentation	Cell/Tissue Engineering and Biomechanics	Robotics and AI for Biomedical Applications	Biosensors and Health Informatics	12			
	В	- BME6118 Biomedical Imaging and Biophotonics - BME6140 Advanced Optical Microscopy for Biomedical Engineering	- BME6121 Biomechanics - BME6135 Engineering Principles for Drug Delivery	- BME6115 Biorobotics - BME6138 Robotics in Minimally Invasive Healthcare	- BME6005 Micro Systems Technology	or 15			
		Elective courses for selection [@] :							
	S	- BME6141 Fundamentals and molecule Biophysics in Rapid	l Applications of Single-		iosensors and Health Informatics BME6117 Biomedical Safety and Risk Assessment				
				,	Total CUs =	30			

- number of credit units
 Courses list may change subject to changes in the programme and/or demand for individual courses.

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MSBME Study Path (2024 Cohort) Full-time Normal Study Path via **<u>Dissertation</u>** (1 Year)

Yr.	Sem.		Courses						
		Elective courses for selection [®] :							
	A	Biomedical Imaging and Bioinstrumentation - BME5110 Biomedical Engineering Design - BME6111 Biomedical Instrumentation		Biomechanics - BME5111 Regenerative - BME			s and AI for cal Applications	Biosensors and Health Informatics	
						- BME6114 Advanced Control Systems		- BME6123 Flexible Bioelectronics for Medical Applications - BME6136 Advanced Biomaterials for Healthcare and Biomedical Applications	15
			_	ourses for selec			D 1 (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Dt 147 141	
1	В	BME6008 Dissertation (6 CUs) Imagi Bioph - BMI - Optice	- BME6118 Imaging an Biophotoni - BME6140 Optical Mid Biomedical	nentation 8 Biomedical addecs O Advanced croscopy for I Engineering	Cell/Tissue Engineering an Biomechanics - BME6121 Biomechanics - BME6135 Eng Principles for D Delivery		Robotics and AI for Biomedical Applications - BME6115 Biorobotics - BME6138 Robotics in Minimally Invasive Healthcare Biosensors and Health Informatics - BME6005 Micro Systems Technology		12
	S	(3CUs)	(3CUs) Elective courses for selection®: Biomedical Imaging and Bioinstrumentat - BME6141 Fundamentals and Applications Single-molecule Biophysics in Rapid Diagno			of - BME6117 Biomedical Safety and Risk Assessment			3
Total CUs = 3									30

- () number of credit units © Courses list may chang Courses list may change subject to changes in the programme and/or demand for individual courses.

MSBME Study Path (2024 Cohort)

Part-time Normal Study Path via **Taught Courses** (2 Years)

Students are required to complete (i) ten electives OR (ii) dissertation + seven electives. The advice is not to take more than 11 credit units in a semester.

Yr.	Sem.		C	ourses		CUs		
1	A	Elective courses for selection [®] :						
		Biomedical Imaging and	Cell/Tissue Engineering and	Robotics and AI for	Biosensors and Health Informatics]		
		Bioinstrumentation	Biomechanics	Biomedical Applications				
					- BME6123 Flexible Bioelectronics for			
		- BME5110 Biomedical	- BME5111 Regenerative	- BME6114 Advanced	Medical Applications			
		Engineering Design	Medicine	Control Systems	- BME6136 Advanced Biomaterials for			
		- BME6111 Biomedical	- BME6101 Manufacturing of		Healthcare and Biomedical Applications			
L		Instrumentation	Biomedical Devices					
	В	Elective courses for selection [®] :				9		
		Biomedical Imaging and	Cell/Tissue Engineering and	Robotics and AI for	Biosensors and Health Informatics]		
		Bioinstrumentation	Biomechanics	Biomedical Applications				
					- BME6005 Micro Systems Technology			
		- BME6118 Biomedical Imaging	- BME6121 Biomechanics	- BME6115 Biorobotics				
		and Biophotonics	- BME6135 Engineering	- BME6138 Robotics in				
		- BME6140 Advanced Optical	Principles for Drug Delivery	Minimally Invasive				
		Microscopy for Biomedical		Healthcare				
		Engineering Elective courses for selection [@] :						
2	A		6					
		Biomedical Imaging and	Cell/Tissue Engineering and	Robotics and AI for	Biosensors and Health Informatics			
		Bioinstrumentation	Biomechanics	Biomedical Applications				
					- BME6123 Flexible Bioelectronics for			
		- BME5110 Biomedical	- BME5111 Regenerative	- BME6114 Advanced	Medical Applications			
		Engineering Design	Medicine	Control Systems	- BME6136 Advanced Biomaterials for			
		- BME6111 Biomedical	- BME6101 Manufacturing of		Healthcare and Biomedical Applications			
-		Instrumentation	Biomedical Devices			6		
	B Elective courses for selection [©] : Riemadical Inspires and Call/Times Engineering and Dahotics and All for Programs and Health Information							
		Biomedical Imaging and	Cell/Tissue Engineering and	Robotics and AI for	Biosensors and Health Informatics			
		Bioinstrumentation	Biomechanics	Biomedical Applications				
					- BME6123 Flexible Bioelectronics for			
		- BME5110 Biomedical	- BME5111 Regenerative	- BME6114 Advanced	Medical Applications			
		Engineering Design	Medicine	Control Systems	- BME6136 Advanced Biomaterials for			
		- BME6111 Biomedical	- BME6101 Manufacturing of		Healthcare and Biomedical Applications			
		Instrumentation	Biomedical Devices					

- () number of credit units
- @ course list may change subject to changes in programme and/or demand for individual courses

MSBME Study Path (2024 Cohort)

Part-time Normal Study Path via **Dissertation** (1.5 Years)

Yr.	Sem.			Courses					CUs
	A	Elective courses for selection [@] :							
		Biomedical Imaging and Bioinstrumentation - BME5110 Biomedical Engineering Design - BME6111 Biomedical - BME6101 Manu		nerative - BME6114 Advanced Control Systems		- BME6123 Flexible Bioelectronics for Medical Applications - BME6136 Advanced Biomaterials for Healthcare and Biomedical			
-	В	Instrumentation Elective courses for sele	of Biomedical De	vices			Applications	BME6008	11
	Б	Biomedical Imaging and Bioinstrumentation	Cell/Tissue Engineering and Biomechanics	Robotics a Biomedica Applicatio	<u>l</u>	Biosensors and Informatics - BME6005 Mic		Dissertation (2 CUs)	11
1		- BME6118 Biomedical Imaging and Biophotonics - BME6140 Advanced Optical Microscopy for Biomedical Engineering	- BME6121 Biomechanics - BME6135 Engineering Principles for Drug Delivery	- BME611: Biorobotics - BME613: in Minimal Healthcare	s B Robotics	Technology	io bysicino	(3 CUs) + (4CUs) Maximum 6 semesters	
	S	Elective courses for sele Biomedical Imaging an	Biosensors	and Health	<u>Informatics</u>			3 or 6	
	- BME6141 Fundamentals and Applications of Single-molecule Biophysics in Rapid Diagnostics			- BME611'	7 Biomedical	Safety and Risk A	ssessment		
2	A	Elective courses for sele	ection@:						4 or 7
		Biomedical Imaging and Bioinstrumentation	Cell/Tissue Engineering and Biomechanics	Robotics a Biomedica Applicatio	<u>l</u>	Biosensors and Informatics - BME6123 Flex			
		- BME5110 Biomedical Engineering Design - BME6111 Biomedical Instrumentation	- BME5111 Regenerative Medicine - BME6101 Manufacturing of Biomedical Devices	- BME6114 Control Sy	4 Advanced stems	Bioelectronics for Applications BME6136 Adv Biomaterials for Biomedical App	or Medical ranced Healthcare and		
						1		Total CUs =	30

- () number of credit units
 © Courses list may change subject to changes in the programme and/or demand for individual courses

Course Selection Hints

Course Content	Weighting (0-100%)	Level of challenge (1 lowest - 5 highest)	Weighting (0-100%)	Level of challenge (1 lowest - 5 highest)	Weighting (0-100%)	Level of challenge (1 lowest - 5 highest)	
			BME5111 Rege	enerative	BME6005 Mi	cro Systems	
	Engineering	Design	Medicine		Technology	chnology	
Biology	30	3	50	4			
Chemistry	10	4	25	3	20	2	
Mathematics	10	4			20	2	
Engineering	50	5	25	3	60	4	
Others							
Total	100%		100%		100%		
	BME6101 M		BME6111 Bion		BME6114 Ad		
	of Biomedica	al Devices	Instrumentation		Control Systems		
Biology	20	2	10	2	10	1	
Chemistry	20	2	10	1			
Mathematics	30	2	15	3	30	3	
Engineering	30	3	65	5	60	3	
Others							
Total	100%		100%		100%		
	BME6115 B	iorobotics	BME6117 Bion Safety and Risk		BME6118 Biomedical Imaging and Biophotonics		
Biology	20	2	35	3			
Chemistry			30	3			
Mathematics	40	3.5			50	4	
Engineering	40	3.5	35	3	50	3	
Other							
Total	100%		100%		100%		
	BME6121 B		BME6123 Flexible Bioelectronics for Medical Applications		BME6135 Engineering Principles for Drug Delivery		
Biology	20	2	20	2	20	1	
Chemistry			15	2	20	2	
Mathematics	40	3.5	5	2	10	3	
Engineering	40	3.5	60	3	30	4	
Other					20(Physiology)	3	
Total	100%		100%		100%		

Course Selection Hints

Course	Weighting	Level of	Weighting	Level of	Weighting	Level of
Content	(0-100%)	challenge	(0-100%)	challenge	(0-100%)	challenge
		(1 lowest -		(1 lowest -		(1 lowest -
		5 highest)		5 highest)		5 highest)
	BME6136 A		BME6138 Robo		BME6140 Ad	
	Biomaterials		Minimally Invas	sive	Optical Micro	
	Healthcare an	- T	Healthcare		Biomedical E	ngineering
	Biomedical A	**				
Biology	20	4	10	2	5	1
Chemistry	30	4	5	1	0	1
Mathematics	5	2	15	3	15	2
Engineering	35	4	50	4	40	3
Other	10	3	20 (Medicine)	3	40 (physics/	3
					optics)	
Total	100%		100%		100%	
	BME6141 Fu	ındamentals				
	and Applicat					
	Single-molec					
	Biophysics in	n Rapid				
	Diagnostics					
Biology	30	3				
Chemistry	20	2				
Mathematics	25	3				
Engineering	25	2				
Other						
Total	100%					