Biomedical Engineering Direction, Full time study, Bachelor level, Specialization: Information Systems in Medicine

				Hours					I						II						III						IV						V						VI						VII					
	Basic Courses	**Course Code**	**Type**	**Sum**	**Lec**	**C**	**Lab**	**P**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**	**Lec**	**C**	**Lab**	**P**	**E**	**ECTS**
B1	Foreign Language	IB-S1-PA-1/2/3/4-B1	**E**	**120**		**120**				30				2		30				2		30				2		30			E	2																		
B2	Physical Education	IB-S1-PA-1/2-B2	**E**	**60**		**60**				30						30																																		
B3	Mathematics	IB-S1-PA-1/2-B3	**B**	**120**	**60**	**60**			30	30			E	5	30	30			E	5																														
B4	Physics	IB-S1-PA-1-B4	**B**	**60**	**30**	**30**			30	30			E	4																																				
B5	Biomedical Data Acquisition	IB-S1-PA-1-B5	**B**	**45**	**15**		**30**		15		30			4																																				
B6	Material Science	IB-S1-PA-1-B6	**B**	**60**	**30**		**30**		30		30			4																																				
B7	Basics of Manufacturing Techniques	IB-S1-PA-1-B7	**B**	**30**	**15**			**15**	15			15		3																																				
B8	Chemistry	IB-S1-PA-1-B8	**B**	**45**	**30**	**15**			30	15				4																																				
B9	Biochemistry	IB-S1-PA-2-B9	**B**	**30**	**15**		**15**								15		15			2																														
B10	Biophysics	IB-S1-PA-2-B10	**B**	**60**	**30**		**30**								30		30			4																														
B11	Computer Programming	IB-S1-PA-1/2/3-B11	**B**	**120**	**30**		**60**	**30**	15		30			4	15		30		E	4				30		2																								
B12	Statistics in Biomedicine	IB-S1-PA-2-B12	**B**	**45**	**15**		**15**	**15**							15		15	15		4																														
B13	Electronics	IB-S1-PA-3-B13	**B**	**60**	**30**		**30**														30		30		E	4																								
B14	Circuit Theory	IB-S1-PA-2-B14	**B**	**30**	**15**	**15**									15	15			E	3																														
B15	Mechanics and Strength of Material	IB-S1-PA-2-B15	**B**	**60**	**30**	**30**									30	30			E	4																														
B16	Introduction to Anatomy and Physiology	IB-S1-PA-2-B16	**B**	**15**	**15**										15					2																														
B17	Medical Imaging Techniques	IB-S1-PA-3-B17	**B**	**45**	**15**		**15**	**15**													15		15	15	E	4																								
B18	Numerical Methods	IB-S1-PA-3-B18	**B**	**60**	**15**		**30**	**15**													15		30	15		4																								
B19	Biomedical Signal Processing	IB-S1-PA-3-B19	**B**	**60**	**30**		**30**														30		30		E	4																								
B20	CAD Foundemantals	IB-S1-PA-4-B20	**B**	**60**	**30**			**30**																			30			30		5																		
B21	Computer Aided Calculations	IB-S1-PA-3-B21	**B**	**30**	**15**		**15**														15		15			2																								
B22	Biomechanical Engineering	IB-S1-PA-4-B22	**B**	**45**	**30**		**15**																				30		15		E	4																		
B23	Introduction to Biomaterials	IB-S1-PA-3-B23	**B**	**60**	**30**		**30**														30		30			4																								
B24	Automation & Control	IB-S1-PA-5-B24	**B**	**75**	**30**	**15**	**30**																										30	15	30			5												
B25	Computer Graphics	IB-S1-PA-4/5-B25	**B**	**45**	**15**		**15**	**15**																			15		15			2				15		2												
B26	Implants	IB-S1-PA-4-B26	**B**	**30**	**15**			**15**																			15			15		2																		
B27	Artificial Organs	IB-S1-PA-6-B27	**B**	**30**	**15**		**15**																																15		15			2						
B28	Legal, Ethical and Social Issues of Biomedical Engineering	IB-S1-PA-7-B28	**B**	**15**	**15**																																								15					1
B29	Normalization and Certification of Medical Products	IB-S1-PA-7-B29	**B**	**45**	**15**			**30**																																					15			30		3
	Specjalization Subjects			**1560**	**630**	**345**	**405**	**180**	**165**	**135**	**90**	**15**	**2**	**30**	**165**	**135**	**90**	**15**	**4**	**30**	**135**	**30**	**150**	**60**	**3**	**26**	**90**	**30**	**30**	**45**	**2**	**15**	**30**	**15**	**30**	**15**		**7**	**15**		**15**			**2**	**30**			**30**		**4**
S1	Algorithms & Data Structures	IB-S1-PA-4-S1-ISiM	**S**	**30**	**15**		**15**																				15		15			2																		
S2	Biosensors	IB-S1-PA-4-S2-ISiM	**S**	**30**	**15**		**15**																				15		15			2																		
S3	Medical Database Designing	IB-S1-PA-4-S3-ISiM	**S**	**45**	**15**		**30**																				15		30			4																		
S4	Biocybernetics	IB-S1-PA-6-S4-ISiM	**S**	**45**	**15**		**15**	**15**																															15		15	15		4						
S5	Embedded Systems	IB-S1-PA-5-S5-ISiM	**S**	**75**	**30**		**30**	**15**																									30		30		E	5				15		1						
S6	Medical Electronic Equipment	IB-S1-PA-4-S6-ISiM	**S**	**45**	**30**			**15**																			30			15	E	4																		
S7	Mechatronics	IB-S1-PA-5-S7-ISiM	**S**	**45**	**15**		**30**																										15		30		E	4												
S8	Reliability of Biomedical Systems	IB-S1-PA-7-S8-ISiM	**S**	**30**	**15**		**15**																																						15		15			2
S9	Medical Image Analysis	IB-S1-PA-5/6-S9-ISiM	**S**	**75**	**15**		**30**	**30**																									15		30		E	4				30		2						
S10	Bionics	IB-S1-PA-6-S10-ISiM	**S**	**60**	**30**		**15**	**15**																															30		15	15	E	5						
S11	Modelling and Simulation of Muscoloskeletal System	IB-S1-PA-4-S11-ISiM	**S**	**45**	**15**		**30**																				15		30			3																		
S12	Designing of Application with Graphical User Interface	IB-S1-PA-5-S12-ISiM	**S**	**45**	**15**		**15**	**15**																									15		15	15		4												
S13	Programming in Python	IB-S1-PA-6-S13-ISiM	**S**	**15**			**15**																																		15			1						
S14	Virtual Reality Modeling	IB-S1-PA-6-S14-ISiM	**S**	**90**	**30**		**60**																																30		60		E	6						
S15	Network Technology in Medicine	IB-S1-PA-7-S15-ISiM	**S**	**30**	**15**		**15**																																						15		15			2
S16	Introduction to graphical programming	IB-S1-PA-6-S16-ISiM	**S**	**45**	**15**		**15**	**15**																															15		15	15		4						
S17	Computional Inteligence in Biomedical Enginieering	IB-S1-PA-7-S17-ISiM	**S**	**45**	**15**			**30**																																					15			30		3
	Elective Courses			**795**	**300**		**345**	**150**																			**90**		**90**	**15**	**1**	**15**	**75**		**105**	**15**	**3**	**17**	**90**		**120**	**90**	**2**	**23**	**45**		**30**	**30**		**7**
E1	Elective Courses	IB-S1-PA-5/7-E1-EC	**E**	**90**	**30**		**15**	**45**																									15			15		2							15		15	30		4
E2	Bachelor Project	IB-S1-PA-7-E2-BP	**E**	**45**				**45**																																								45		15
E3	HES I*	IB-S1-PA-3-E3-ISiM	**B**	**60**				**60**																60		4																								
E4	HES II*	IB-S1-PA-5-E4-ISiM	**B**	**60**				**60**																												60		4												
E5	HES III*	IB-S1-PA-6-E5-ISiM	**B**	**60**				**60**																																		60		4						
E6	Practise	IB-S1-PA-E6-4-P	**E**																																									1						
				315	**30**		**15**	**270**																60		4							15			75		6				60		5	15		15	75		19
				2670	**960**	**345**	**765**	**600**	**165**	**135**	**90**	**15**	**2**	**30**	**165**	**135**	**90**	**15**	**4**	**30**	**135**	**30**	**150**	**120**	**3**	**30**	**180**	**30**	**120**	**60**	**3**	**30**	**120**	**15**	**135**	**105**	**3**	**30**	**105**		**135**	**150**	**2**	**30**	**90**		**45**	**135**		**30**
				Hours per week										27						27						29						26						25						26						18

Type B – Basic course, **Type E – elective course,** * HES elective courses

Approved by Faculty Council:

Valid from October 2018