

General courses - specialty <b>MEDICAL INFORMATICS</b>										I year					II year					III year					IV year																		
No.	Module name	E/Z	Total	incl.				ECTS	sem. 1 15 weeks					sem. 2 15 weeks					sem. 3 15 weeks					sem. 4 15 weeks					sem. 5 15 weeks					sem. 6 15 weeks					sem. 7 15 weeks				
				Lectures	Class ex.	Laborat.	semin.		Lectures	Class ex.	Laborat.	semin.	ECTS	Lectures	Class ex.	Laborat.	semin.	ECTS	Lectures	Class ex.	Laborat.	semin.	ECTS	Lectures	Class ex.	Laborat.	semin.	ECTS	Lectures	Class ex.	Laborat.	semin.	ECTS	Lectures	Class ex.	Laborat.	semin.	ECTS					
Basic content P	01	Mathematics I	E	60	30	30	0	0	6	30	30				6																												
	02	Mathematics II	E	60	30	30	0	0	6							30	30			6																							
	03	Physics with elements of biophysics	E	60	30	0	30	0	5	30		30			5																												
	04	Chemistry with elements of biochemistry	E	60	30	0	30	0	5	30		30			5																												
	05	Material science	E	60	30	0	30	0	5							30		30		5																							
	06	Statistics and probability calculus	E	45	15	30	0	0	5													15	30			5																	
	07	Electrotechnics and electronics	E	60	30	0	30	0	6													30		30		6																	
	08	Mechanics and strength of materials	E	60	30	30	0	0	7													30	30		7																		
Total P – Basic content				465	225	120	120	0	45	90	30	60	0	16	60	30	30	0	11	75	60	30	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

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Directional content of biomedical engineering K	01	Anatomy and physiology	E	45	15	0	30	0	5	15		30			5																												
	02	Propaedeutics of medical sciences	Z	15	15	0	0	0	2							15				2																							
	03	Metrology and measurement of non-electrical quantities	Z	45	15	0	30	0	4							15		30		4																							
	04	Biomaterials	E	45	15	0	30	0	4									15		30	4																						
	05	Computer-aided engineering design	Z	45	15	0	30	0	4							15		30		4																							
	06	Implants and artificial organs	E	45	15	0	30	0	4																	15	30		4														
	07	Medical imaging techniques	E	45	15	0	30	0	4																15	30		4															
	08	Automation and robotics	Z	30	0	0	30	0	4																	30		4															
	09	Digital signal processing	E	30	0	0	30	0	3																	30		3															
	10	Medical electronic equipment	Z	45	15	0	30	0	4																15	30		4															
	11	Biomechanics engineering	E	30	0	30	0	0	3																30		3																
Total K - directional content of biomedical engineering				420	120	30	270	0	41	15	0	30	0	5	45	0	60	0	10	15	0	30	0	4	45	30	150	0	22	0	0	0	0	0	0	0	0	0	0	0	0		

Studia kończą się nadaniem tytułu zawodowego **inżyniera biomedycznego** na kierunku **inżynieria biomedyczna** - specjalność: **informatyka medyczna**

Plan studiów zatwierdzony przez Radę Wydziału w dniu: **18.06.2013 r.**

Otrzymują:

1. Dział Kształcenia
2. Instytut Informatyki
3. Dziekanat

.....  
(pieczęć i podpis Dyrektora Instytutu Informatyki)

.....  
(pieczęć i podpis Dziekana)

General courses - specialty MEDICAL INFORMATICS										I year					II year					III year					IV year																	
No.	Module name	E/Z	Total	w tym				sem. 1 15 weeks					sem. 2 15 weeks					sem. 3 15 weeks					sem. 4 15 weeks					sem. 5 15 weeks					sem. 6 15 weeks					sem. 7 15 weeks				
				Lecturers	Class ex.	Laborat.	semin.	ECTS	Lecturers	Class ex.	Laborat.	semin.	ECTS	Lecturers	Class ex.	Laborat.	semin.	ECTS	Lecturers	Class ex.	Laborat.	semin.	ECTS	Lecturers	Class ex.	Laborat.	semin.	ECTS	Lecturers	Class ex.	Laborat.	semin.	ECTS	Lecturers	Class ex.	Laborat.	semin.	ECTS				
				Specialization content in Computer Science	01	Information technology	Z	30	0	30	0	0	2	30					2																							
02	Programming languages	E	45		15	0	30	0	5	15	30				5																											
03	Modeling and 3D visualization in medicine	E	45		15	0	30	0	4				15	30		4																										
04	Operating systems	Z	30		0	0	30	0	3					30		3																										
05	Data bases	Z	45		15	0	30	0	4								15	30		4																						
06	Software engineering	E	45		15	0	30	0	4									15	30		4																					
07	Artificial neural networks	E	30		15	0	15	0	3														15	15		3																
08	Introduction to Embedded Systems	E	30		0	0	30	0	4															30		4																
09	Network technologies	Z	15		0	0	15	0	3															15		3																
Total I - specialization content in Computer Science				315	75	30	210	0	32	15	30	30	0	7	15	0	60	0	7	15	0	30	0	4	15	0	30	0	4	15	0	60	0	10	0	0	0	0	0			

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				Additional content	01	English language I	Z	30	0	30	0	0	2	30					2																									
02	English language II	Z	30		0	30	0	0	2				30		2																													
03	English language III	Z	30		0	30	0	0	2							30		2																										
04	English language IV	E	30		0	30	0	0	2									30		2																								
05	Physical education	Z	30		0	30	0	0	1								30		1																									
06	Safety and ergonomics	Z	15		15	0	0	0	1								15		1																									
07	Legal and ethical aspects of biomedical engineering	Z	30		15	15	0	0	2										15	15		2																						
08	Innovation management	Z	30		0	30	0	0	2														30		2																			
09	Protection of intellectual property	E	45		15	30	0	0	2															15	30		2																	
10	Fundamentals of business and economics in business	Z	30		0	30	0	0	2																						30						2							
11	Practical training after 4 semester min. 120 hours	Z	0		0	0	0	0	4																													4						
Total U – additional content				300	45	255	0	0	22	0	30	0	0	2	0	30	0	0	2	15	60	0	0	4	15	45	0	0	4	0	30	0	0	2	15	30	0	0	2	0	30	0	0	6