PROGRAM OF MSC LEVEL STUDIES OF MEDICAL BIOTECHNOLOGY SINCE 2023/2024

MSC MEDICAL BIOTECHNOLOGY PROGRAMME																	
SEMESTER	No.	Course / module	ECTS	Examinaion (E) or subject completion (z)	Hours					Hours							
										I ROK				II ROK			
										sem. I		sem. II		sem. III		SEM. IV	
										15 weeks		15 weeks		15 weeks		15 weeks	
					In total	Lecture (L)	Practices (c)	Seminar (c)	Laboratories (c)	L*	c*	L*	c*	L*	c*	L*	c*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
I	1.	Structure and Function of Proteins	2	E	15	15				15							
	2.	Protein Biotechnology- laboratories	2	z	30				30		30						
	3.	Molecular Biology Tech. - advanced course- laboratories	2	z	30				30		30						
	4.	PCR Methods - Technique and Application	2	E	15	15				15							
	5.	PCR Methods - Technique and Application - laboratories	2	z	30				30		30						
	6.	Cell Culture Tech. - advanced course - laboratories	2	z	30				30		30						
	7.	Molecular Organization of Bacterial Cell	2	E	15	15				15							
	8.	Molecular Organization of Bacterial Cell - laboratories	2	z	30				30		30						
	9.	Computer Programs Used in Research Work– computer laboratories	2	z	15		15				15						
	10.	Seminar	2	z	15			15			15						
	11.	Self-Presentation Methods*	2	z	15			15			15						
	12.	Elective lecture**	2	z	15	15				15							

	13.	Initial training in the field of health and safety and fire protection (e-learning)		z	4		4										

	14.	English (B2+ level)	4	E	60		60				60						
	15.	Polish (for foreigners, A1 level)		z	30		30				30						
28 ECTS / 349 hours.; 4 exams																	
II	16.	Experimental Techniques in Structural Biology	3	E	15	15						15					
	17.	Experimental Techniques in Structural Biology - laboratories	2	z	30				30				30				
	18.	Systems Biology	2	E	15	15						15					
	19.	Systems Biology - laboratories	2	z	30				30				30				
	20.	Glycobiology	2	z	15	15						15					
	21.	Seminar	2	z	15			15					15				
	22.	Genomics and Molecular Evolution	3	E	30	30						30					
		Genomics and Molecular Evolution – computer laboratories	3	z	30		30						30				
	23.	Degree project**	12	z	120				120				120				
	24.	Elective lecture**	2	z	15	15						15					
	25.	Polish (for foreigners, A1 level)	5	E	30		30						30				
38 ECTS / 345 hours; 3 exams (Polish students)/4 exams (foreigners)																	
III	26.	Molecular Basis of Medical Microbiology	2	z	15	15								15			
	27.	Protein Posttranslational Modifications in Genome Structure and Stability	2	z	15	15								15			
	28.	Cancer Biology	2	E	15	15								15			
	29.	Drug Carriers	2	E	15	15								15			
	30.	Drug Carriers - laboratories	2	z	30				30						30		
	31.	Seminar	3	z	30			30							30		

	32.	Innovation and Transfer of Knowledge to Business*	2	z	15	15	.	.	.	.	.	.	.	15	.	.	.
	33.	Virology	3	E	30	30	.	.	.	.	.	.	.	30	.	.	.
	34.	Degree Project**	12	z	120	.	.	.	120	.	.	.	.	.	120	.	.
	35.	Elective lecture**	2	z	15	15	.	.	.	.	.	.	.	15	.	.	.
32 ECTS / 300 hours; 3 exams																	
IV	36.	Genetic Manipulation and Selected Aspects of Gene Therapies	2	E	15	15	.	.	.	.	.	.	.	–	.	15	–
	37.	Ethics in Biotechnology*	2	z	15	15	–	–	–	–	–	–	–	–	–	15	–
	38.	Degree Project**	23	z	200	.	.	.	200	.	.	.	.	.	.	.	200
	39.	Elective lecture**	2	z	15	15	.	.	.	.	.	.	.	.	.	15	.
29 ECTS / 245 hours; 1 exam																	
Hours in total: 1239 / ECTS in total: 122 (Polish students) 127 (foreigners)																	

L – lecture
c – practices, seminars, laboratories
* classes in the humanities and/or social science field
** elective classes