


## PROGRAM OF MSC LEVEL STUDIES OF MEDICAL BIOTECHNOLOGY


L - lecture, c – practices, seminars, laboratories

SEMESTER NUMBER	Lp.	SUBJECT	ECTS	Examination (E) or subject completion (z) after semester	HOURS					NUMBER OF CLASS HOURS							
					Total number of hours	Lecture (L)	Practices (c)	Seminar (c)	Laboratories (c)	1 <sup>st</sup> year				2 <sup>nd</sup> year			
										1 <sup>st</sup> sem.		2 <sup>nd</sup> sem.		3 <sup>rd</sup> sem.		4 <sup>th</sup> sem.	
										15 weeks		15 weeks		15 weeks		15 weeks	
L*	c*	L*	c*	L*	c*	L*	c*										
<b>1</b>		<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
SEMESTER 1	1.	Protein structure and function	2	E	15	15	–	–	–	15	–	–	–	–	–	–	–
	2.	Protein Biotechnology	2	z	30	–	–	–	30	–	30	–	–	–	–	–	–
	3.	Molecular Biology Tech. - advanced course	2	z	30	–	–	–	30	–	30	–	–	–	–	–	–
	4.	PCR Method - Technique and Application	4 (2/2)	E/z	45	15	–	–	30	15	30	–	–	–	–	–	–
	5.	Cell Culture Tech. - advanced course	2	z	30	–	–	–	30	–	30	–	–	–	–	–	–
	6.	Molecular Organization of Bacterial Cell	4 (2/2)	E/z	45	15	–	–	30	15	30	–	–	–	–	–	–
	7.	Computer programs used in research work	2	z	15	–	15	–	–	–	15	–	–	–	–	–	–
	8.	Seminar	2	z	15	–	–	15	–	–	15	–	–	–	–	–	–
	9.	Self-Presentation Methods	2	z	15	–	–	15	–	–	15	–	–	–	–	–	–
	10.	Elective lecture	2	z	15	15	–	–	–	15	–	–	–	–	–	–	–
	11.	Foreign language (B2+ level)	–	z	30	–	30	–	–	–	30	–	–	–	–	–	–
	12.	Polish (for foreigners, A1 level)	–	z	30	–	30	–	–	–	30	–	–	–	–	–	–
			<b>ECTS:</b>	<b>24</b>													
SEMESTER 2	13.	Experimental Techniques in Structural Biology	5 (2/3)	E/z	55	15	–	–	40	–	–	15	40	–	–	–	–
	14.	Systems Biology	4 (2/2)	E/z	45	15	–	–	30	–	–	15	30	–	–	–	–
	15.	Glycobiology	2	z	15	15	–	–	–	–	–	15	–	–	–	–	–
	16.	Seminar	2	z	15	–	–	15	–	–	–	–	15	–	–	–	–
	17.	Genomics and molecular evolution	6 (3/3)	E/z	60	30	30	–	–	–	–	30	30	–	–	–	–
	18.	Degree project (Specialization Laboratory)	12	z	150	–	–	–	150	–	–	–	150	–	–	–	–
	19.	Elective lecture	2	z	15	15	–	–	–	–	–	15	–	–	–	–	–
20.	Foreign language (B2+ level)	–	z	30	–	30	–	–	–	–	–	30	–	–	–	–	
21.	Polish (for foreigners, A1 level)	–	z	30	–	30	–	–	–	–	–	30	–	–	–	–	
			<b>ECTS:</b>	<b>33</b>													

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
SEMESTER 3	22.	Molecular basis of medical microbiology	2	z	15	15	-	-	-	-	-	-	-	15	-	-	-	
	23.	Protein posttranslational modifications in genome structure and stability	2	z	15	15	-	-	-	-	-	-	-	15	-	-	-	
	24.	Cancer Biology	2	E	15	15	-	-	-	-	-	-	-	15	-	-	-	
	25.	Drug carriers	4 (2/2)	E/z	45	15	-	-	30	-	-	-	-	15	30	-	-	
	26.	Seminar	3	z	30	-	-	30	-	-	-	-	-	-	30	-	-	
	27.	Innovation and Transfer of Knowledge to business	2	z	15	15	-	-	-	-	-	-	-	15	-	-	-	
	28.	Virology	3	E	30	30	-	-	-	-	-	-	-	30	-	-	-	
	29.	Degree project (Specialization Laboratory)	12	z	150	-	-	-	150	-	-	-	-	-	150	-	-	
	30.	Elective lecture	2	z	15	15	-	-	-	-	-	-	-	15	-	-	-	
SEMESTER 4	<b>ECTS: 32</b>																	
	31.	Genetic manipulation and selected aspects of gene therapies	2	E	15	15	-	-	-	-	-	-	-	-	-	-	15	-
	32.	Ethics in biotechnology	2	z	15	15	-	-	-	-	-	-	-	-	-	-	15	-
	33.	Degree project (Specialization Laboratory)	23	z	240	-	-	-	240	-	-	-	-	-	-	-	-	240
34.	Elective lecture	2	z	15	15	-	-	-	-	-	-	-	-	-	-	15	-	
<b>ECTS: 29</b>																		
		Foreign language (B2+ level)	4	z	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Polish (for foreigners, A1 level)	5	z	-	-	-	-	-	-	-	-	-	-	-	-	-	

 Elective classes

 Classes in the areas of humanities and social sciences

 Foreign language courses