

**STUDIA II LEVEL, MAGISTERSKIE (3 sem)****DIRECTION: BIOTECHNOLOGY**Specialty: **Bioinformatics** (Prof. A. Sokalski)

<b>Sem.</b>	<b>I</b>	<b>II</b>	<b>III</b>
<b>Godz.</b>	<b>24h / 30 ECTS / 2E</b>	<b>24h / 30 ECTS / 2E</b>	<b>24h / 30 ECTS / 1E</b>
<b>26</b>			
<b>25</b>			
<b>24</b>	Bioprocess project 2p (3ECTS)	Introduction to multimedia in biotechnology 1l (1 ECTS)	Economics and organization of industrial biotechnology 2w (3 ECTS)
<b>23</b>		Principles of business 2w (3 ECTS)	
<b>22</b>	Theoretical chemistry <b>E</b> 2w +2l		Computational genomics <b>E</b> 1w+1l (1+1 ECTS)
<b>21</b>	(4 +2) ECTS	Rational drug design 2w (3 ECTS)	
<b>20</b>			Genetic engineering in analytics and diagnostics 3l (2 ECTS)
<b>19</b>		Molecular modeling <b>E</b> 1w +2l + 1s	
<b>18</b>	Molecular dynamics 2w +2c	(2 + 2 + 1) ECTS	
<b>17</b>	(4 + 2) ECTS		Philosophy of science and technology 1w ( 2 ECTS)
<b>16</b>			Mathematical methods in design and analysis of experiment 1w (1 ECTS)
<b>15</b>		Instrumental drug analysis 1w + 2l	Graduate laboratory II 14l (10 ECTS)
<b>14</b>	Networks and workstations with UNIX system 2l (2 ECTS)	(2 + 2) ECTS	
<b>13</b>			
<b>12</b>	Bioinformatics <b>E</b> 2w +2l	Methodology of experimental research 2w (3 ECTS)	
<b>11</b>	(4 + 2) ECTS		
<b>10</b>		Bionanotechnology <b>E</b> 2w + 1s	
<b>9</b>		(3 + 1) ECTS	
<b>8</b>	Applied informatics 4l (4 ECTS)		
<b>7</b>		Retrieval of scientific information 1l (1 ECTS)	
<b>6</b>		Advanced programming and numerical methods 2l (2 ECTS)	
<b>5</b>			
<b>4</b>	Foreign language II 3c (2 ECTS)	Graduate laboratory I 4l (4 ECTS)	
<b>3</b>			
<b>2</b>			
<b>1</b>	Foreign language I 1c (1 ECTS)		Graduate seminar - and thesis preparation 1s (10 ECTS)
<b>Sem.</b>	<b>I</b>	<b>II</b>	<b>III</b>

Allowable deficit of ECTS credits after each semester **15** credits