

KIERUNEK: BIOTECHNOLOGIA  
 Specjalność studiów: -  
 Poziom studiów: I stopień  
 Profil studiów: ogólnoakademicki  
 Forma studiów: stacjonarne

Plan studiów obowiązujący od roku akademickiego 2019/2020

Załącznik Nr 4 do Uchwały Senatu nr XXIV-27.18/19 z dnia 29 maja 2019 r.

| Lp.   | Nazwa modułu (przedmiotu)   | Punkty ECTS | Wymiar godzin (łącznie) |             |            |             |            | Rok I     |            |            |            |            |           |            |             |            |            | Rok II    |           |           |            |             |           |           |     |             |            | Rok III    |             |    |             |           |            |           |            |             |            |            |           |            |           |
|---|---|-------------|-------------------------|-------------|------------|-------------|------------|-----------|------------|------------|------------|------------|-----------|------------|-------------|------------|------------|-----------|-----------|-----------|------------|-------------|-----------|-----------|-----|-------------|------------|------------|-------------|----|-------------|-----------|------------|-----------|------------|-------------|------------|------------|-----------|------------|-----------|
|   |   |             | Razem                   | Rodzaj zaj. |            |             |            |           | 1          |            |            |            |           | 2          |             |            |            |           | 3         |           |            |             |           | 4         |     |             |            |            | 5           |    |             |           |            | 6         |            |             |            |            |           |            |           |
|   |   |             |                         | WY          | CA         | LB          | KW         | SM        | WY         | CA         | LB         | KW         | SM        | Forma zal. | Punkty ECTS | WY         | CA         | LB        | KW        | SM        | Forma zal. | Punkty ECTS | WY        | CA        | LB  | KW          | SM         | Forma zal. | Punkty ECTS | WY | CA          | LB        | KW         | SM        | Forma zal. | Punkty ECTS | WY         | CA         | LB        | KW         | SM        |
| <b>Blok modułów (przedmiotów) obowiązkowych - A</b>               |   |             |                         |             |            |             |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 1   | Chemia ogólna i nieorganiczna   | 3.5         | 45                      | 30          |            | 15          |            |           |            | 30         | 15         |            |           |            | egz.        | 3.5        |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 2   | Elementy chemii analitycznej  | 3           | 40                      |             |            | 25          | 15         |           |            |            | 25         | 15         |           |            | zal.        | 3          |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 3   | Fizyka i biofizyka  | 7           | 85                      | 30          |            | 40          | 15         |           |            | 30         | 40         | 15         |           |            | egz.        | 7          |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 4   | Mikrobiologia KP  | 6.5         | 75                      | 30          |            | 45          |            |           |            | 30         | 45         |            |           |            | egz.        | 6.5        |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 5   | Ochrona własności intelektualnej  | 1           | 15                      | 15          |            |             |            |           |            | 15         |            |            |           |            | zal.        | 1          |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 6   | WF  | 0           | 60                      |             |            | 60          |            |           |            | 30         |            |            |           |            | zal.        | 0          |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 7   | Szkolenia*  | 1           | 8                       | 8           |            |             |            |           |            | 8          |            |            |           |            | z.bo.       | 1          |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 8   | Chemia organiczna   | 7.5         | 90                      | 30          |            | 60          |            |           |            |            |            |            |           | 30         |             | 60         |            |           |           | egz.      | 7.5        |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 9   | Ochrona środowiska KP   | 1.5         | 45                      | 30          |            | 15CT        |            |           |            |            |            |            |           | 30         | 15CT        |            |            |           |           | z.śr.     | 1.5        |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 10  | Technologia informacyjna  | 1.5         | 30                      |             |            | 30          |            |           |            |            |            |            |           |            |             | 30         |            |           |           | zal.      | 1.5        |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 11  | Anatomia funkcjonalna człowieka KP  | 2           | 45                      | 30          |            | 15          |            |           |            |            |            |            |           |            |             | 30         | 15         |           |           | zal.      | 2          |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 12  | Fizjologia zwierząt KP  | 5           | 60                      | 20          |            | 40          |            |           |            |            |            |            |           |            |             |            |            |           |           |           | 20         | 40          |           |           |     |             | egz.       | 5          |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 13  | Techniki laboratoryjne  | 5           | 60                      |             |            | 60          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            | 60          |           |           |     |             | zal.       | 5          |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 14  | Biologia komórki KP   | 5           | 60                      | 30          |            | 30          |            |           |            |            |            |            |           |            |             |            |            |           |           |           | 30         | 30          |           |           |     |             | egz.       | 5          |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 15  | Fizjologia roślin KP  | 5           | 60                      | 30          |            | 30          |            |           |            |            |            |            |           |            |             |            |            |           |           |           | 30         | 30          |           |           |     |             | egz.       | 5          |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 16  | Mikrobiologia przemysłowa KR  | 10          | 120                     | 45          |            | 75          |            |           |            |            |            |            |           |            |             | 45         | 75         |           |           | egz.      | 10         |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 17  | Biologia molekularna KR   | 10.5        | 120                     | 45          |            | 75          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            | 45          | 75        |           |     |             | egz.       | 11         |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 18  | Inżynieria genetyczna KR  | 9.5         | 90                      | 30          |            | 60          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            | 30          | 60        |           |     |             | egz.       | 9.5        |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 19  | Język angielski B2  | 8           | 120                     |             |            | 120L        |            |           |            |            |            |            |           | 30L        | zal.        | 1.5        |            |           |           | 30L       | zal.       | 1.5         |           |           | 30L | zal.        | 1.5        |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 20  | Podstawy bioinformatyki   | 2           | 20                      |             |            | 20          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 21  | Etyka   | 1.5         | 20                      | 20          |            |             |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 22  | Immunologia   | 6           | 75                      | 30          |            | 45          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 23  | Inżynieria procesów biotechnologicznych   | 6           | 75                      | 30          |            | 45          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 24  | Metody biotechnologiczne w ochr. środowiska KR  | 3.5         | 60                      | 30          |            | 20          | 10         |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 25  | Praktikum z hodowli komórek i tkanek  | 5.5         | 60                      |             |            | 60          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 26  | Statystyka  | 1.5         | 25                      | 15          |            | 10          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| <b>Razem A</b>  |   | <b>119</b>  | <b>1563</b>             | <b>528</b>  | <b>75</b>  | <b>790</b>  | <b>170</b> |           |            | <b>113</b> | <b>30</b>  | <b>125</b> | <b>30</b> |            | <b>22</b>   | <b>60</b>  | <b>45</b>  | <b>90</b> | <b>30</b> |           | <b>12</b>  | <b>75</b>   | <b>90</b> | <b>30</b> |     | <b>13.5</b> | <b>80</b>  | <b>160</b> | <b>30</b>   |    | <b>21.5</b> | <b>75</b> | <b>155</b> | <b>30</b> |            | <b>26</b>   | <b>125</b> | <b>170</b> | <b>20</b> | <b>24</b>  |           |
| <b>Blok modułów (przedmiotów) wybieralnych/fakultatywnych - B</b> |   |             |                         |             |            |             |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 27  | <sup>a</sup> Biologia roślin i zwierząt / <sup>b</sup> Biology of plants and animals                    | 16          | 210                     | 60          | 60CT       | 90          |            |           |            | 30         | 45         |            |           | zal.       | 3           | 30         | 60CT       | 45        |           | egz.      | 13         |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 28  | <sup>a</sup> Matematyka / <sup>b</sup> Mathematics  | 5           | 60                      | 30          |            | 30          |            |           |            | 30         |            | 30         |           | egz.       | 5           |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 29  | <sup>a</sup> Chemia fizyczna / <sup>b</sup> Physical chemistry  | 4           | 60                      | 30          |            | 30          |            |           |            |            |            |            |           |            |             | 30         | 30         |           |           | z.śr.     | 4          |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 30  | <sup>a</sup> Biochemia KR / <sup>b</sup> Biochemistry - an extensive cou                                | 10.5        | 120                     | 45          |            | 75          |            |           |            |            |            |            |           |            |             | 45         | 75         |           |           | egz.      | 10.5       |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 31  | <sup>a</sup> Genetyka KP / <sup>b</sup> Genetics - a basic course                                       | 6           | 75                      | 30          |            | 45          |            |           |            |            |            |            |           |            |             | 30         | 45         |           |           | egz.      | 6          |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 32  | <sup>a</sup> Enzymologia KP / <sup>b</sup> Enzymology - a basic course                                  | 6           | 75                      | 30          |            | 45          |            |           |            |            |            |            |           |            |             |            |            |           |           |           | 30         | 45          |           |           |     |             | egz.       | 6          |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 33  | <sup>a</sup> Problemy współczesnej filozofii / <sup>b</sup> Historia filozofii z el. filozofii przyrody | 2.5         | 30                      | 30          |            |             |            |           |            |            |            |            |           |            |             |            |            |           |           |           | 30         |             |           |           |     |             | egz.       | 2.5        |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 34  | Wykłady ogólnouniwersyteckie  | 1           | 15                      | 15          |            |             |            |           |            |            |            |            |           |            |             | 15         |            |           |           |           | zal.       | 1           |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| 35  | Seminarium  | 3           | 45                      |             |            | 45          |            |           |            |            |            |            |           |            |             |            |            |           |           |           |            |             |           |           |     |             |            |            |             |    |             |           |            |           |            |             |            |            |           |            |           |
| <b>Razem B</b>  |   | <b>54</b>   | <b>690</b>              | <b>270</b>  | <b>60</b>  | <b>285</b>  | <b>30</b>  | <b>45</b> | <b>60</b>  | <b>60</b>  | <b>45</b>  | <b>30</b>  |           | <b>8</b>   | <b>75</b>   | <b>60</b>  | <b>75</b>  |           |           | <b>18</b> | <b>75</b>  | <b>120</b>  |           |           |     | <b>16.5</b> | <b>60</b>  | <b>45</b>  |             |    | <b>8.5</b>  |           |            |           |            |             |            | <b>45</b>  | <b>3</b>  |            |           |
| <b>Razem A+B</b>  |   | <b>173</b>  | <b>2253</b>             | <b>798</b>  | <b>135</b> | <b>1075</b> | <b>200</b> | <b>45</b> | <b>173</b> | <b>30</b>  | <b>170</b> | <b>60</b>  |           | <b>30</b>  | <b>135</b>  | <b>105</b> | <b>165</b> | <b>30</b> |           | <b>30</b> | <b>150</b> | <b>210</b>  | <b>30</b> |           |     | <b>30</b>   | <b>140</b> | <b>205</b> | <b>30</b>   |    | <b>30</b>   | <b>75</b> | <b>155</b> | <b>30</b> |            | <b>26</b>   | <b>125</b> | <b>170</b> | <b>20</b> | <b>45</b>  | <b>27</b> |
| <b>Razem godziny w semestrze</b>                                  |   |             |                         |             |            |             |            |           |            | <b>433</b> |            |            |           |            |             | <b>435</b> |            |           |           |           |            | <b>390</b>  |           |           |     |             |            | <b>375</b> |             |    |             |           |            |           |            | <b>260</b>  |            |            |           | <b>360</b> |           |

