

# **PLAN STUDIÓW**

**WYDZIAŁ:** Budownictwa Lądowego i Wodnego

**KIERUNEK:** *budownictwo*

**POZIOM KSZTAŁCENIA:** I stopień, studia inżynierskie

**FORMA STUDIÓW:** ~~stacjonarna~~ / niestacjonarna\*

**PROFIL:** ogólnoakademicki / ~~praktyczny~~\*

**SPECJALNOŚĆ:** Inżynieria Budowlana, Geotechnika i Hydrotechnika, Inżynieria Lądowa (specjalności dyplomowania)

**JĘZYK STUDIÓW:** polski

Uchwała Rady Wydziału nr 387/20/2016-2020 z dnia 25.04.2018 r.

Obowiązuje od 1.10.2018 r.

**PLAN STUDIÓW NIESTACJONARNYCH**

**INŻYNIERIA BUDOWLANA [IBB]**

**BUILDING ENGINEERING**

Zestaw modułów obowiązkowych i wybieralnych w układzie semestralnym

Opiekun specjalności: dr hab. inż. Andrzej UBYSZ, prof. nadzw. PWr

Rok I, semestr 1

| Nr kat.                            | Nazwa modułu                              | W         |           | A        |          | L        |          | P        |          | S        |          | E/GK     | Razem moduł |           |
|------------------------------------|---|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|-----------|
|                                    |   | h         | ECTS      | h        | ECTS     | h        | ECTS     | h        | ECTS     | h        | ECTS     |          | h           | ECTS      |
| MAT001465                          | Algebra z geometrią analityczną           | 2         | 2         | 1        | 2        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 3           | 4         |
|                                    | <i>Algebra and analytical geometry</i>    |           |           |          |          |          |          |          |          |          |          |          |             |           |
| MAT001471                          | Analiza matematyczna 1.1 A                | 2         | 5         | 2        | 3        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 4           | 8         |
|                                    | <i>Mathematical analysis 1.1.A</i>        |           |           |          |          |          |          |          |          |          |          |          |             |           |
| FZP002211                          | Fizyka 1.1                                | 2         | 4         | 1        | 1        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 3           | 5         |
|                                    | <i>Physics 1.1</i>                        |           |           |          |          |          |          |          |          |          |          |          |             |           |
| AUA108652                          | Geometria wykreślna                       | 2         | 3         | 1        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | GK       | 3           | 3         |
|                                    | <i>Descriptive geometry</i>               |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB000671                          | Rysunek techniczny                        | 0         | 0         | 1        | 1        | 0        | 0        | 1        | 1        | 0        | 0        |          | 2           | 2         |
|                                    | <i>Technical drawing</i>                  |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB000771                          | Technologie informacyjne                  | 1         | 1         | 0        | 0        | 2        | 2        | 0        | 0        | 0        | 0        |          | 3           | 3         |
|                                    | <i>Information technology</i>             |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB000871                          | Chemia materiałów budowlanych             | 2         | 2         | 0        | 0        | 1        | 1        | 0        | 0        | 0        | 0        |          | 3           | 3         |
|                                    | <i>Chemistry of building materials</i>    |           |           |          |          |          |          |          |          |          |          |          |             |           |
| <b>Moduł wybieralny z bloku A:</b> |   | 2         | 2         | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |          | 2           | 2         |
| BDB000971                          | Środowisko naturalne człowieka            |           |           |          |          |          |          |          |          |          |          |          |             |           |
|                                    | <i>Natural environment of human being</i> |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB001071                          | Budownictwo i ekologia                    |           |           |          |          |          |          |          |          |          |          |          |             |           |
|                                    | <i>Building and ecology</i>               |           |           |          |          |          |          |          |          |          |          |          |             |           |
| <b>Razem w semestrze:</b>          |   | <b>13</b> | <b>19</b> | <b>6</b> | <b>7</b> | <b>3</b> | <b>3</b> | <b>1</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>3</b> | <b>23</b>   | <b>30</b> |

## Rok I, semestr 2

| Nr kat.                                       | Nazwa modułu  | W  |      | A  |      | L |      | P |      | S |      | E/GK | Razem moduł |      |
|---|---|----|------|----|------|---|------|---|------|---|------|------|-------------|------|
|   |   | h  | ECTS | h  | ECTS | h | ECTS | h | ECTS | h | ECTS |      | h           | ECTS |
| MAT001475                                     | Analiza matematyczna 2.1 A                          | 2  | 4    | 2  | 3    | 0 | 0    | 0 | 0    | 0 | 0    | E    | 4           | 7    |
|   | <i>Mathematical analysis 2.1.A</i>                  |    |      |    |      |   |      |   |      |   |      |      |             |      |
| FZP002212                                     | Fizyka 2.1  | 2  | 4    | 0  | 0    | 1 | 1    | 0 | 0    | 0 | 0    | E    | 3           | 5    |
|   | <i>Physics 2.1</i>                                  |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000172                                     | Mechanika ogólna                                    | 2  | 2    | 1  | 1    | 0 | 0    | 0 | 0    | 0 | 0    | E    | 3           | 3    |
|   | <i>General mechanics</i>                            |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000272                                     | Geologia inżynierska                                | 1  | 1    | 1  | 1    | 1 | 1    | 0 | 0    | 0 | 0    |      | 3           | 3    |
|   | <i>Engineering geology</i>                          |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000372                                     | Geodezja  | 1  | 1    | 0  | 0    | 0 | 0    | 2 | 2    | 0 | 0    |      | 3           | 3    |
|   | <i>Geodesy</i>                                      |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000472                                     | Materiały budowlane                                 | 2  | 2    | 0  | 0    | 2 | 2    | 0 | 0    | 0 | 0    | E    | 4           | 4    |
|   | <i>Building materials</i>                           |    |      |    |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku B:</b> |   | 0  | 0    | 0  | 0    | 2 | 3    | 0 | 0    | 0 | 0    |      | 2           | 3    |
| BDB000572                                     | Komputerowe wspomaganie kreślenia – kurs podstawowy |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Computer aided design – basic level</i>          |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000672                                     | Zaawansowane komputerowe wspomaganie kreślenia      |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Computer aided design – advanced level</i>       |    |      |    |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku C:</b> |   | 2  | 2    | 0  | 0    | 0 | 0    | 0 | 0    | 0 | 0    |      | 2           | 2    |
| SCH000214                                     | Socjologia organizacji i kierowania                 |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Sociology of organization and leadership</i>     |    |      |    |      |   |      |   |      |   |      |      |             |      |
| PSZ001123                                     | Psychologia zarządzania zespołami                   |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Team management psychology</i>                   |    |      |    |      |   |      |   |      |   |      |      |             |      |
| PSZ001124                                     | Zarządzanie zespołem pracowników                    |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Team of employee management</i>                  |    |      |    |      |   |      |   |      |   |      |      |             |      |
| <b>Razem w semestrze:</b>                     |   | 12 | 16   | 4  | 5    | 6 | 7    | 2 | 2    | 0 | 0    | 4    | 24          | 30   |
| <b>Razem narastająco:</b>                     |   | 25 | 35   | 10 | 12   | 9 | 10   | 3 | 3    | 0 | 0    | 7    | 47          | 60   |

## Rok II, semestr 3

| Nr kat.                   | Nazwa modułu   | W         |           | A         |           | L         |           | P        |          | S        |          | E/GK      | Razem moduł |           |
|---------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|-------------|-----------|
|                           |  | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     | h        | ECTS     |           | h           | ECTS      |
| MAT001506                 | Analiza matematyczna 3   | 2         | 2         | 0         | 0         | 0         | 0         | 0        | 0        | 0        | 0        |           | 2           | 2         |
|                           | <i>Mathematical analysis 3</i>                                   |           |           |           |           |           |           |          |          |          |          |           |             |           |
| MAT001507                 | Statystyka stosowana   | 1         | 2         | 1         | 0         | 0         | 0         | 0        | 0        | 0        | 0        | GK        | 2           | 2         |
|                           | <i>Applied statistics</i>  |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000173                 | Budownictwo ogólne 1   | 2         | 3         | 0         | 0         | 0         | 0         | 2        | 3        | 0        | 0        | E         | 4           | 6         |
|                           | <i>General building engineering 1</i>                            |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000273                 | Wytrzymałość materiałów 1  | 2         | 3         | 2         | 3         | 0         | 0         | 0        | 0        | 0        | 0        | E         | 4           | 6         |
|                           | <i>Strength of materials 1</i>                                   |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000373                 | Podstawy statyki budowli   | 2         | 3         | 0         | 0         | 0         | 0         | 2        | 2        | 0        | 0        | E         | 4           | 5         |
|                           | <i>Introduction to statics of structures</i>                     |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000473                 | Hydraulika i hydrologia  | 1         | 1         | 1         | 1         | 1         | 1         | 0        | 0        | 0        | 0        |           | 3           | 3         |
|                           | <i>Hydraulics and hydrology</i>                                  |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000573                 | Technologia betonów i zapraw                                     | 1         | 1         | 0         | 0         | 2         | 2         | 0        | 0        | 0        | 0        |           | 3           | 3         |
|                           | <i>Technology of concrete and mortars</i>                        |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000673                 | Podstawy projektowania i oddziaływania na konstrukcje budowlane  | 1         | 2         | 1         | 1         | 0         | 0         | 0        | 0        | 0        | 0        |           | 2           | 3         |
|                           | <i>Introduction to design and actions on building structures</i> |           |           |           |           |           |           |          |          |          |          |           |             |           |
| <b>Razem w semestrze:</b> |  | <b>12</b> | <b>17</b> | <b>5</b>  | <b>5</b>  | <b>3</b>  | <b>3</b>  | <b>4</b> | <b>5</b> | <b>0</b> | <b>0</b> | <b>3</b>  | <b>24</b>   | <b>30</b> |
| <b>Razem narastająco:</b> |  | <b>37</b> | <b>52</b> | <b>15</b> | <b>17</b> | <b>12</b> | <b>13</b> | <b>7</b> | <b>8</b> | <b>0</b> | <b>0</b> | <b>10</b> | <b>71</b>   | <b>90</b> |

## Rok II, semestr 4

| Nr kat.                                       | Nazwa modułu                              | W         |           | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem moduł |            |
|---|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|   |   | h         | ECTS      | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB000174                                     | Budownictwo ogólne 2                      | 2         | 3         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        | E         | 3           | 5          |
|   | <i>General building engineering 2</i>     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000274                                     | Konstrukcje betonowe – podstawy           | 2         | 2         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 3           | 4          |
|   | <i>Concrete structures – fundamentals</i> |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000374                                     | Konstrukcje metalowe – podstawy           | 2         | 2         | 0         | 0         | 1         | 1         | 0         | 0         | 0        | 0        |           | 3           | 3          |
|   | <i>Metal structures – fundamentals</i>    |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000474                                     | Statyka budowli                           | 3         | 3         | 0         | 0         | 2         | 3         | 0         | 0         | 0        | 0        | E         | 5           | 6          |
|   | <i>Structural statics</i>                 |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000574                                     | Wytrzymałość materiałów 2                 | 2         | 3         | 0         | 0         | 1         | 1         | 1         | 2         | 0        | 0        | E         | 4           | 6          |
|   | <i>Strength of materials 2</i>            |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000674                                     | Mechanika gruntów                         | 2         | 3         | 0         | 0         | 1         | 1         | 1         | 2         | 0        | 0        | E         | 4           | 6          |
|   | <i>Soil mechanics</i>                     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku W:</b> |   | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0        | 0        |           | 0           | 0          |
| WFW02000BK                                    | Zajęcia sportowe – wybór sekcji           |           |           |           |           |           |           |           |           |          |          |           |             |            |
|   | <i>Optional sports</i>                    |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>                     |   | <b>13</b> | <b>16</b> | <b>0</b>  | <b>0</b>  | <b>5</b>  | <b>6</b>  | <b>4</b>  | <b>8</b>  | <b>0</b> | <b>0</b> | <b>4</b>  | <b>22</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>                     |   | <b>50</b> | <b>68</b> | <b>15</b> | <b>17</b> | <b>17</b> | <b>19</b> | <b>11</b> | <b>16</b> | <b>0</b> | <b>0</b> | <b>14</b> | <b>93</b>   | <b>120</b> |

## Rok III, semestr 5

| Nr kat.  | Nazwa modułu  | W         |           | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem moduł |            |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|  |   | h         | ECTS      | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB000175  | Konstrukcje betonowe – elementy i hale              | 3         | 4         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 5           | 7          |
|  | <i>Concrete structures – elements and halls</i>     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000275  | Konstrukcje metalowe – elementy i hale              | 3         | 4         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 5           | 7          |
|  | <i>Metal structures – elements and halls</i>        |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000375  | Budownictwo wodne - podstawy                        | 1         | 1         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 2           | 3          |
|  | <i>Fundamentals of hydro-engineering structures</i> |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000475  | Fundamentowanie                                     | 2         | 2         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 4           | 5          |
|  | <i>Foundation engineering</i>                       |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000575  | Podstawy dynamiki budowli                           | 1         | 1         | 1         | 2         | 0         | 0         | 0         | 0         | 0        | 0        |           | 2           | 3          |
|  | <i>Introduction to dynamics of structures</i>       |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku D:</b>                              |   | 1         | 1         | 0         | 0         | 1         | 2         | 0         | 0         | 0        | 0        |           | 2           | 3          |
| BDB000675  | Metody obliczeniowe                                 |           |           |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Computational methods</i>                        |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000775  | Metody numeryczne w mechanice                       |           |           |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Numerical methods in mechanics</i>               |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku E (wybór języka i/lub poziomu):</b> |   | 0         | 0         | 4         | 2         | 0         | 0         | 0         | 0         | 0        | 0        |           | 4           | 2          |
| JZB158331BK  | Język obcy <sup>1)</sup>                            |           |           |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Foreign language<sup>1)</sup></i>                |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>  |   | <b>11</b> | <b>13</b> | <b>5</b>  | <b>4</b>  | <b>1</b>  | <b>2</b>  | <b>7</b>  | <b>11</b> | <b>0</b> | <b>0</b> | <b>3</b>  | <b>24</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>  |   | <b>61</b> | <b>81</b> | <b>20</b> | <b>21</b> | <b>18</b> | <b>21</b> | <b>18</b> | <b>27</b> | <b>0</b> | <b>0</b> | <b>17</b> | <b>117</b>  | <b>150</b> |

## Rok III, semestr 6

| Nr kat.                                       | Nazwa modułu  | W |      | A |      | L |      | P |      | S |      | E/GK | Razem modul |      |
|---|---|---|------|---|------|---|------|---|------|---|------|------|-------------|------|
|   |   | h | ECTS | h | ECTS | h | ECTS | h | ECTS | h | ECTS |      | h           | ECTS |
| BDB000476                                     | Technologia robót budowlanych   | 2 | 2    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 3           | 4    |
|   | <i>Building construction technology</i>                                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000576                                     | Fizyka budowli  | 2 | 2    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 3           | 4    |
|   | <i>Building physics</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000676                                     | Ekonomika budownictwa   | 1 | 1    | 0 | 0    | 1 | 1    | 0 | 0    | 0 | 0    |      | 2           | 2    |
|   | <i>Construction economics</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000776                                     | Zagadnienia bezpieczeństwa pracy  | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 1 | 1    |      | 2           | 2    |
|   | <i>Health and safety in constructions</i>                               |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000876                                     | Koleje – podstawy   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Railways – fundamentals</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000976                                     | Podstawy mostownictwa   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Introduction to bridge engineering</i>                               |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB001076                                     | Drogi i ulice – podstawy  | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Roads and streets – fundamentals</i>                                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
| ELR000276                                     | Instalacje elektryczne  | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 0 | 0    |      | 1           | 1    |
|   | <i>Electrical systems</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku F:</b> |   | 0 | 0    | 4 | 3    | 0 | 0    | 0 | 0    | 0 | 0    |      | 4           | 3    |
| JZB146156BK                                   | Język obcy <sup>1)</sup>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Foreign language <sup>1)</sup></i>                                   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku G:</b> |   | 1 | 2    | 0 | 0    | 0 | 0    | 1 | 1    | 0 | 0    |      | 2           | 3    |
| BDB001176                                     | Podstawy inżynierii miejskiej i budownictwa podziemnego                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Introduction to municipal engineering and underground structures</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB001276                                     | Podstawy budownictwa podziemnego i inżynierii miejskiej                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Introduction to underground structures and municipal engineering</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |

| <b>Zestaw modułów wybieralnych z bloku H:</b> |  | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1        | 2        |           | 1          | 2          |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|------------|------------|
| <b>FLH020476</b>                              | Wprowadzenie do filozofii                                      |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Introduction to philosophy</i>                              |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>FLH020576</b>                              | Filozofia techniki i estetyka nowych technologii               |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Philosophy of technics and aesthetics of new technology</i> |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>FLH020676</b>                              | Filozofia społeczna  |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Social philosophy</i>                                       |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>Razem w semestrze:</b>                     |  | <b>11</b> | <b>12</b> | <b>4</b>  | <b>3</b>  | <b>1</b>  | <b>1</b>  | <b>6</b>  | <b>11</b> | <b>2</b> | <b>3</b> | <b>0</b>  | <b>24</b>  | <b>30</b>  |
| <b>Razem narastająco:</b>                     |  | <b>72</b> | <b>93</b> | <b>24</b> | <b>24</b> | <b>19</b> | <b>22</b> | <b>24</b> | <b>38</b> | <b>2</b> | <b>3</b> | <b>17</b> | <b>141</b> | <b>180</b> |





|   |  |           |            |           |           |           |           |           |           |          |          |           |            |            |
|---|--|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|------------|------------|
| <b>Zestaw modułów wybieralnych z bloku I:</b> |  | 1         | 1          | 0         | 0         | 0         | 0         | 1         | 1         | 0        | 0        |           | 2          | 2          |
| <b>ISS303129</b>                              | Instalacje sanitarne                   |           |            |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Sanitary systems</i>                |           |            |           |           |           |           |           |           |          |          |           |            |            |
| <b>BDB000677</b>                              | Urządzenia wodno-kanalizacyjne         |           |            |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Water-supply and sewage systems</i> |           |            |           |           |           |           |           |           |          |          |           |            |            |
| <b>Razem w semestrze:</b>                     |  | <b>12</b> | <b>13</b>  | <b>4</b>  | <b>6</b>  | <b>2</b>  | <b>3</b>  | <b>3</b>  | <b>5</b>  | <b>3</b> | <b>3</b> | <b>3</b>  | <b>24</b>  | <b>30</b>  |
| <b>Razem narastająco:</b>                     |  | <b>84</b> | <b>106</b> | <b>28</b> | <b>30</b> | <b>21</b> | <b>25</b> | <b>27</b> | <b>43</b> | <b>5</b> | <b>6</b> | <b>20</b> | <b>165</b> | <b>210</b> |

Rok IV, semestr 8

| Nr kat.  | Nazwa modułu   | W  |      | A  |      | L  |      | P  |      | S |      | E/GK | Razem moduł |      |
|--|--|----|------|----|------|----|------|----|------|---|------|------|-------------|------|
|  |  | h  | ECTS | h  | ECTS | h  | ECTS | h  | ECTS | h | ECTS |      | h           | ECTS |
| BDB019878  | Seminarium dyplomowe                                     | 0  | 0    | 0  | 0    | 0  | 0    | 0  | 0    | 2 | 3    |      | 2           | 3    |
|  | <i>Engineering (BSc) thesis tutorial</i>                 |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB019978  | Praca dyplomowa inżynierska                              |    |      |    |      |    |      |    |      |   |      |      | 6           | 17   |
|  | <i>Engineering (BSc) thesis</i>                          |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB019778  | Praktyka zawodowa  |    |      |    |      |    |      |    |      |   |      |      |             | 7    |
|  | <i>Industrial internship</i>                             |    |      |    |      |    |      |    |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku IBB2:</b> |  | 1  | 1    | 0  | 0    | 0  | 0    | 0  | 0    | 1 | 1    |      | 2           | 2    |
| BDB010178  | Technologiczność konstrukcji budowlanych                 |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Producibility of building structures</i>              |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB010278  | Trwałość i ochrona budowli                               |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Durability and protection of buildings</i>            |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB010378  | Systemowe budownictwo mieszkaniowe                       |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Systems of apartment building</i>                     |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB010478  | Efektywność energetyczna budynków                        |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Energy efficiency of buildings</i>                    |    |      |    |      |    |      |    |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku J:</b>    |  | 1  | 1    | 0  | 0    | 0  | 0    | 0  | 0    | 0 | 0    |      | 1           | 1    |
| EKZ001133  | Ekonomiczne i prawne otoczenie przedsiębiorstwa          |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>The economic and legal environments of enterprise</i> |    |      |    |      |    |      |    |      |   |      |      |             |      |
| ZMZ001275  | Podstawy zarządzania                                     |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Essentials of management</i>                          |    |      |    |      |    |      |    |      |   |      |      |             |      |
| EKZ001134  | Ekonomika przedsiębiorstwa                               |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Business economics</i>                                |    |      |    |      |    |      |    |      |   |      |      |             |      |
| <b>Razem w semestrze:</b>                        |  | 2  | 2    | 0  | 0    | 0  | 0    | 0  | 0    | 3 | 4    | 0    | 5           | 30   |
| <b>Razem narastająco:</b>                        |  | 86 | 108  | 28 | 30   | 21 | 25   | 27 | 43   | 8 | 10   | 20   | 170         | 240  |

w 86.0 50.6%

CNPS 6480 h

(WF 8 ZZU, 1 ECTS, 8 CNPS)

a+l+p+s 84.0 49.4%

ZZU 1700 h

1 ECTS 27 h

CNPS

a 28.0 16.5%

l 21.0 12.4%

p 27.0 15.9%

s 8.0 4.7%

E – obowiązuje egzamin

GK – grupa kursów ( jedno łączne zaliczenie modułu)

Na wszystkich specjalnościach obowiązuje zaliczenie 3-miesięcznej praktyki zawodowej za 7 pkt (liczonych w sumie 240 pkt) - realizacja w okresach wakacyjnych po II lub III roku. Miejsce praktyki (przedsiębiorstwo) wybiera student.

<sup>1)</sup> Student jest zobowiązany zrealizować język obcy w wymiarze 8h/5 ECTS, zasadniczo na poziomie B2/1 i B2/2.

Jeżeli zna już język obcy na odpowiednim poziomie, może to być zastąpione np. poziomami B2/2 i C1.

Jeżeli ma kłopoty z językiem obcym (przed zapisami musi wypełnić odpowiedni test w celu ustalenia poziomu znajomości języka obcego), to będzie musiał najpierw zapisać się na kurs wyrównawczy (poza 8 h obowiązkowych zajęć).

**PLAN STUDIÓW NIESTACJONARNYCH**  
**GEOTECHNIKA I HYDROTECHNIKA [GIH]**  
**GEOTECHNICS AND HYDROENGINEERING**

Zestaw modułów obowiązkowych i wybieralnych w układzie semestralnym  
 Opiekun specjalności: dr hab. inż. Stanisław KOSTECKI, prof. nadzw. PWr

Rok I, semestr 1

| Nr kat.                            | Nazwa modułu  | W         |           | A        |          | L        |          | P        |          | S        |          | E/GK     | Razem moduł |           |
|------------------------------------|---|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|-----------|
|                                    |   | h         | ECTS      | h        | ECTS     | h        | ECTS     | h        | ECTS     | h        | ECTS     |          | h           | ECTS      |
| <b>MAT001465</b>                   | Algebra z geometrią analityczną<br><i>Algebra and analytical geometry</i>   | 2         | 2         | 1        | 2        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 3           | 4         |
| <b>MAT001471</b>                   | Analiza matematyczna 1.1 A<br><i>Mathematical analysis 1.1.A</i>            | 2         | 5         | 2        | 3        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 4           | 8         |
| <b>FZP002211</b>                   | Fizyka 1.1<br><i>Physics 1.1</i>  | 2         | 4         | 1        | 1        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 3           | 5         |
| <b>AUA108652</b>                   | Geometria wykreślna<br><i>Descriptive geometry</i>                          | 2         | 3         | 1        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | GK       | 3           | 3         |
| <b>BDB000671</b>                   | Rysunek techniczny<br><i>Technical drawing</i>                              | 0         | 0         | 1        | 1        | 0        | 0        | 1        | 1        | 0        | 0        |          | 2           | 2         |
| <b>BDB000771</b>                   | Technologie informacyjne<br><i>Information technology</i>                   | 1         | 1         | 0        | 0        | 2        | 2        | 0        | 0        | 0        | 0        |          | 3           | 3         |
| <b>BDB000871</b>                   | Chemia materiałów budowlanych<br><i>Chemistry of building materials</i>     | 2         | 2         | 0        | 0        | 1        | 1        | 0        | 0        | 0        | 0        |          | 3           | 3         |
| <b>Moduł wybieralny z bloku A:</b> |   | 2         | 2         | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |          | 2           | 2         |
| <b>BDB000971</b>                   | Środowisko naturalne człowieka<br><i>Natural environment of human being</i> |           |           |          |          |          |          |          |          |          |          |          |             |           |
| <b>BDB001071</b>                   | Budownictwo i ekologia<br><i>Building and ecology</i>                       |           |           |          |          |          |          |          |          |          |          |          |             |           |
| <b>Razem w semestrze:</b>          |   | <b>13</b> | <b>19</b> | <b>6</b> | <b>7</b> | <b>3</b> | <b>3</b> | <b>1</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>3</b> | <b>23</b>   | <b>30</b> |

## Rok I, semestr 2

| Nr kat.                                       | Nazwa modułu  | W         |           | A         |           | L        |           | P        |          | S        |          | E/GK     | Razem modul |           |
|---|---|-----------|-----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|----------|-------------|-----------|
|   |   | h         | ECTS      | h         | ECTS      | h        | ECTS      | h        | ECTS     | h        | ECTS     |          | h           | ECTS      |
| MAT001475                                     | Analiza matematyczna 2.1 A                          | 2         | 4         | 2         | 3         | 0        | 0         | 0        | 0        | 0        | 0        | E        | 4           | 7         |
|   | <i>Mathematical analysis 2.1.A</i>                  |           |           |           |           |          |           |          |          |          |          |          |             |           |
| FZP002212                                     | Fizyka 2.1  | 2         | 4         | 0         | 0         | 1        | 1         | 0        | 0        | 0        | 0        | E        | 3           | 5         |
|   | <i>Physics 2.1</i>                                  |           |           |           |           |          |           |          |          |          |          |          |             |           |
| BDB000172                                     | Mechanika ogólna                                    | 2         | 2         | 1         | 1         | 0        | 0         | 0        | 0        | 0        | 0        | E        | 3           | 3         |
|   | <i>General mechanics</i>                            |           |           |           |           |          |           |          |          |          |          |          |             |           |
| BDB000272                                     | Geologia inżynierska                                | 1         | 1         | 1         | 1         | 1        | 1         | 0        | 0        | 0        | 0        |          | 3           | 3         |
|   | <i>Engineering geology</i>                          |           |           |           |           |          |           |          |          |          |          |          |             |           |
| BDB000372                                     | Geodezja  | 1         | 1         | 0         | 0         | 0        | 0         | 2        | 2        | 0        | 0        |          | 3           | 3         |
|   | <i>Geodesy</i>                                      |           |           |           |           |          |           |          |          |          |          |          |             |           |
| BDB000472                                     | Materiały budowlane                                 | 2         | 2         | 0         | 0         | 2        | 2         | 0        | 0        | 0        | 0        | E        | 4           | 4         |
|   | <i>Building materials</i>                           |           |           |           |           |          |           |          |          |          |          |          |             |           |
| <b>Zestaw modułów wybieralnych z bloku B:</b> |   | 0         | 0         | 0         | 0         | 2        | 3         | 0        | 0        | 0        | 0        |          | 2           | 3         |
| BDB000572                                     | Komputerowe wspomaganie kreślenia – kurs podstawowy |           |           |           |           |          |           |          |          |          |          |          |             |           |
|   | <i>Computer aided design – basic level</i>          |           |           |           |           |          |           |          |          |          |          |          |             |           |
| BDB000672                                     | Zaawansowane komputerowe wspomaganie kreślenia      |           |           |           |           |          |           |          |          |          |          |          |             |           |
|   | <i>Computer aided design – advanced level</i>       |           |           |           |           |          |           |          |          |          |          |          |             |           |
| <b>Zestaw modułów wybieralnych z bloku C:</b> |   | 2         | 2         | 0         | 0         | 0        | 0         | 0        | 0        | 0        | 0        |          | 2           | 2         |
| SCH000214                                     | Socjologia organizacji i kierowania                 |           |           |           |           |          |           |          |          |          |          |          |             |           |
|   | <i>Sociology of organization and leadership</i>     |           |           |           |           |          |           |          |          |          |          |          |             |           |
| PSZ001123                                     | Psychologia zarządzania zespołami                   |           |           |           |           |          |           |          |          |          |          |          |             |           |
|   | <i>Team management psychology</i>                   |           |           |           |           |          |           |          |          |          |          |          |             |           |
| PSZ001124                                     | Zarządzanie zespołem pracowników                    |           |           |           |           |          |           |          |          |          |          |          |             |           |
|   | <i>Team of employee management</i>                  |           |           |           |           |          |           |          |          |          |          |          |             |           |
| <b>Razem w semestrze:</b>                     |   | <b>12</b> | <b>16</b> | <b>4</b>  | <b>5</b>  | <b>6</b> | <b>7</b>  | <b>2</b> | <b>2</b> | <b>0</b> | <b>0</b> | <b>4</b> | <b>24</b>   | <b>30</b> |
| <b>Razem narastająco:</b>                     |   | <b>25</b> | <b>35</b> | <b>10</b> | <b>12</b> | <b>9</b> | <b>10</b> | <b>3</b> | <b>3</b> | <b>0</b> | <b>0</b> | <b>7</b> | <b>47</b>   | <b>60</b> |

## Rok II, semestr 3

| Nr kat.                   | Nazwa modułu   | W         |           | A         |           | L         |           | P        |          | S        |          | E/GK      | Razem modul |           |
|---------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|-------------|-----------|
|                           |  | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     | h        | ECTS     |           | h           | ECTS      |
| MAT001506                 | Analiza matematyczna 3   | 2         | 2         | 0         | 0         | 0         | 0         | 0        | 0        | 0        | 0        |           | 2           | 2         |
|                           | <i>Mathematical analysis 3</i>                                   |           |           |           |           |           |           |          |          |          |          |           |             |           |
| MAT001507                 | Statystyka stosowana   | 1         | 2         | 1         | 0         | 0         | 0         | 0        | 0        | 0        | 0        | GK        | 2           | 2         |
|                           | <i>Applied statistics</i>  |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000173                 | Budownictwo ogólne 1   | 2         | 3         | 0         | 0         | 0         | 0         | 2        | 3        | 0        | 0        | E         | 4           | 6         |
|                           | <i>General building engineering 1</i>                            |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000273                 | Wytrzymałość materiałów 1  | 2         | 3         | 2         | 3         | 0         | 0         | 0        | 0        | 0        | 0        | E         | 4           | 6         |
|                           | <i>Strength of materials 1</i>                                   |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000373                 | Podstawy statyki budowli   | 2         | 3         | 0         | 0         | 0         | 0         | 2        | 2        | 0        | 0        | E         | 4           | 5         |
|                           | <i>Introduction to statics of structures</i>                     |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000473                 | Hydraulika i hydrologia  | 1         | 1         | 1         | 1         | 1         | 1         | 0        | 0        | 0        | 0        |           | 3           | 3         |
|                           | <i>Hydraulics and hydrology</i>                                  |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000573                 | Technologia betonów i zapraw                                     | 1         | 1         | 0         | 0         | 2         | 2         | 0        | 0        | 0        | 0        |           | 3           | 3         |
|                           | <i>Technology of concrete and mortars</i>                        |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000673                 | Podstawy projektowania i oddziaływania na konstrukcje budowlane  | 1         | 2         | 1         | 1         | 0         | 0         | 0        | 0        | 0        | 0        |           | 2           | 3         |
|                           | <i>Introduction to design and actions on building structures</i> |           |           |           |           |           |           |          |          |          |          |           |             |           |
| <b>Razem w semestrze:</b> |  | <b>12</b> | <b>17</b> | <b>5</b>  | <b>5</b>  | <b>3</b>  | <b>3</b>  | <b>4</b> | <b>5</b> | <b>0</b> | <b>0</b> | <b>3</b>  | <b>24</b>   | <b>30</b> |
| <b>Razem narastająco:</b> |  | <b>37</b> | <b>52</b> | <b>15</b> | <b>17</b> | <b>12</b> | <b>13</b> | <b>7</b> | <b>8</b> | <b>0</b> | <b>0</b> | <b>10</b> | <b>71</b>   | <b>90</b> |

## Rok II, semestr 4

| Nr kat.                                       | Nazwa modułu                              | W         |           | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem moduł |            |
|---|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|   |   | h         | ECTS      | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB000174                                     | Budownictwo ogólne 2                      | 2         | 3         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        | E         | 3           | 5          |
|   | <i>General building engineering 2</i>     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000274                                     | Konstrukcje betonowe – podstawy           | 2         | 2         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 3           | 4          |
|   | <i>Concrete structures – fundamentals</i> |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000374                                     | Konstrukcje metalowe – podstawy           | 2         | 2         | 0         | 0         | 1         | 1         | 0         | 0         | 0        | 0        |           | 3           | 3          |
|   | <i>Metal structures – fundamentals</i>    |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000474                                     | Statyka budowli                           | 3         | 3         | 0         | 0         | 2         | 3         | 0         | 0         | 0        | 0        | E         | 5           | 6          |
|   | <i>Structural statics</i>                 |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000574                                     | Wytrzymałość materiałów 2                 | 2         | 3         | 0         | 0         | 1         | 1         | 1         | 2         | 0        | 0        | E         | 4           | 6          |
|   | <i>Strength of materials 2</i>            |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000674                                     | Mechanika gruntów                         | 2         | 3         | 0         | 0         | 1         | 1         | 1         | 2         | 0        | 0        | E         | 4           | 6          |
|   | <i>Soil mechanics</i>                     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku W:</b> |   | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0        | 0        |           | 0           | 0          |
| WFW020000BK                                   | Zajęcia sportowe – wybór sekcji           |           |           |           |           |           |           |           |           |          |          |           |             |            |
|   | <i>Optional sports</i>                    |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>                     |   | <b>13</b> | <b>16</b> | <b>0</b>  | <b>0</b>  | <b>5</b>  | <b>6</b>  | <b>4</b>  | <b>8</b>  | <b>0</b> | <b>0</b> | <b>4</b>  | <b>22</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>                     |   | <b>50</b> | <b>68</b> | <b>15</b> | <b>17</b> | <b>17</b> | <b>19</b> | <b>11</b> | <b>16</b> | <b>0</b> | <b>0</b> | <b>14</b> | <b>93</b>   | <b>120</b> |



Rok III, semestr 5

| Nr kat.  | Nazwa modułu  | W         |           | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem modul |            |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|  |   | h         | ECTS      | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB000175  | Konstrukcje betonowe – elementy i hale              | 3         | 4         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 5           | 7          |
|  | <i>Concrete structures – elements and halls</i>     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000275  | Konstrukcje metalowe – elementy i hale              | 3         | 4         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 5           | 7          |
|  | <i>Metal structures – elements and halls</i>        |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000375  | Budownictwo wodne - podstawy                        | 1         | 1         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 2           | 3          |
|  | <i>Fundamentals of hydro-engineering structures</i> |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000475  | Fundamentowanie                                     | 2         | 2         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 4           | 5          |
|  | <i>Foundation engineering</i>                       |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000575  | Podstawy dynamiki budowli                           | 1         | 1         | 1         | 2         | 0         | 0         | 0         | 0         | 0        | 0        |           | 2           | 3          |
|  | <i>Introduction to dynamics of structures</i>       |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku D:</b>                              |   | 1         | 1         | 0         | 0         | 1         | 2         | 0         | 0         | 0        | 0        |           | 2           | 3          |
| BDB000675  | Metody obliczeniowe                                 |           |           |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Computational methods</i>                        |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000775  | Metody numeryczne w mechanice                       |           |           |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Numerical methods in mechanics</i>               |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku E (wybór języka i/lub poziomu):</b> |   | 0         | 0         | 4         | 2         | 0         | 0         | 0         | 0         | 0        | 0        |           | 4           | 2          |
| JZB158331BK  | Język obcy – poziom B2/1 <sup>1)</sup>              |           |           |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Foreign language – level B2/1<sup>1)</sup></i>   |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>  |   | <b>11</b> | <b>13</b> | <b>5</b>  | <b>4</b>  | <b>1</b>  | <b>2</b>  | <b>7</b>  | <b>11</b> | <b>0</b> | <b>0</b> | <b>3</b>  | <b>24</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>  |   | <b>61</b> | <b>81</b> | <b>20</b> | <b>21</b> | <b>18</b> | <b>21</b> | <b>18</b> | <b>27</b> | <b>0</b> | <b>0</b> | <b>17</b> | <b>117</b>  | <b>150</b> |

Rok III, semestr 6

| Nr kat.                                       | Nazwa modułu  | W |      | A |      | L |      | P |      | S |      | E/GK | Razem modul |      |
|---|---|---|------|---|------|---|------|---|------|---|------|------|-------------|------|
|   |   | h | ECTS | h | ECTS | h | ECTS | h | ECTS | h | ECTS |      | h           | ECTS |
| BDB000476                                     | Technologia robót budowlanych   | 2 | 2    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 3           | 4    |
|   | <i>Building construction technology</i>                                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000576                                     | Fizyka budowli  | 2 | 2    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 3           | 4    |
|   | <i>Building physics</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000676                                     | Ekonomika budownictwa   | 1 | 1    | 0 | 0    | 1 | 1    | 0 | 0    | 0 | 0    |      | 2           | 2    |
|   | <i>Construction economics</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000776                                     | Zagadnienia bezpieczeństwa pracy  | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 1 | 1    |      | 2           | 2    |
|   | <i>Health and safety in constructions</i>                               |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000876                                     | Koleje – podstawy   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Railways – fundamentals</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000976                                     | Podstawy mostownictwa   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Introduction to bridge engineering</i>                               |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB001076                                     | Drogi i ulice – podstawy  | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Roads and streets – fundamentals</i>                                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
| ELR000276                                     | Instalacje elektryczne  | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 0 | 0    |      | 1           | 1    |
|   | <i>Electrical systems</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku F:</b> |   | 0 | 0    | 4 | 3    | 0 | 0    | 0 | 0    | 0 | 0    |      | 4           | 3    |
| JZB146156BK                                   | Język obcy – poziom B2/2 <sup>1)</sup>                                  |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Foreign language – level B2/2<sup>1)</sup></i>                       |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku G:</b> |   | 1 | 2    | 0 | 0    | 0 | 0    | 1 | 1    | 0 | 0    |      | 2           | 3    |
| BDB001176                                     | Podstawy inżynierii miejskiej i budownictwa podziemnego                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Introduction to municipal engineering and underground structures</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB001276                                     | Podstawy budownictwa podziemnego i inżynierii miejskiej                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Introduction to underground structures and municipal engineering</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |

|   |  |           |           |           |           |           |           |           |           |          |          |           |            |            |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|------------|------------|
| <b>Zestaw modułów wybieralnych z bloku H:</b> |  | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1        | 2        |           | 1          | 2          |
| FLH020476                                     | Wprowadzenie do filozofii                                      |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Introduction to philosophy</i>                              |           |           |           |           |           |           |           |           |          |          |           |            |            |
| FLH020576                                     | Filozofia techniki i estetyka nowych technologii               |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Philosophy of technics and aesthetics of new technology</i> |           |           |           |           |           |           |           |           |          |          |           |            |            |
| FLH020676                                     | Filozofia społeczna  |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Social philosophy</i>                                       |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>Razem w semestrze:</b>                     |  | <b>11</b> | <b>12</b> | <b>4</b>  | <b>3</b>  | <b>1</b>  | <b>1</b>  | <b>6</b>  | <b>11</b> | <b>2</b> | <b>3</b> | <b>0</b>  | <b>24</b>  | <b>30</b>  |
| <b>Razem narastająco:</b>                     |  | <b>72</b> | <b>93</b> | <b>24</b> | <b>24</b> | <b>19</b> | <b>22</b> | <b>24</b> | <b>38</b> | <b>2</b> | <b>3</b> | <b>17</b> | <b>141</b> | <b>180</b> |

Rok IV, semestr 7

| Nr kat.  | Nazwa modułu  | W         |            | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem modul |            |
|--|---|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|  |   | h         | ECTS       | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB000477  | Organizacja produkcji budowlanej i kierowanie procesami inwestycyjnymi              | 2         | 2          | 2         | 3         | 0         | 0         | 0         | 0         | 0        | 0        |           | 4           | 5          |
|  | <i>Principles of construction organisation and management of investment process</i> |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB000577  | Prawo budowlane   | 1         | 1          | 0         | 0         | 0         | 0         | 0         | 0         | 1        | 1        |           | 2           | 2          |
|  | <i>Civil engineering law regulations</i>  |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020177  | Budownictwo podziemne   | 1         | 1          | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 3           | 4          |
|  | <i>Underground structures</i>   |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020277  | Budownictwo ziemne  | 1         | 1          | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 3           | 4          |
|  | <i>Earth engineering</i>  |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020377  | Fundamentowanie – głębokie wykopy   | 1         | 2          | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 3           | 5          |
|  | <i>Foundation engineering – deep excavations</i>                                    |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020477  | Komputerowe wspomaganie projektowania w geotechnice                                 | 0         | 0          | 0         | 0         | 3         | 3         | 0         | 0         | 0        | 0        |           | 3           | 3          |
|  | <i>Computer aided design in geo-engineering</i>                                     |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020577  | Komputerowe wspomaganie projektowania w hydrotechnice                               | 0         | 0          | 0         | 0         | 2         | 2         | 0         | 0         | 0        | 0        |           | 2           | 2          |
|  | <i>Computer aided design in hydro-engineering</i>                                   |           |            |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku GIH1:</b> |   | 1         | 1          | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 2           | 3          |
| BDB020677  | Budowle piętrzące   |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Hydro-engineering structures</i>   |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020777  | Odwodnienia   |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Dewatering</i>   |           |            |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku I:</b>    |   | 1         | 1          | 0         | 0         | 0         | 0         | 1         | 1         | 0        | 0        |           | 2           | 2          |
| ISS303129  | Instalacje sanitarne  |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Sanitary systems</i>   |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB000677  | Urządzenia wodno-kanalizacyjne  |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Water-supply and sewage systems</i>  |           |            |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>                        |   | <b>8</b>  | <b>9</b>   | <b>2</b>  | <b>3</b>  | <b>5</b>  | <b>5</b>  | <b>8</b>  | <b>12</b> | <b>1</b> | <b>1</b> | <b>3</b>  | <b>24</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>                        |   | <b>80</b> | <b>102</b> | <b>26</b> | <b>27</b> | <b>24</b> | <b>27</b> | <b>32</b> | <b>50</b> | <b>3</b> | <b>4</b> | <b>20</b> | <b>165</b>  | <b>210</b> |

Rok IV, semestr 8

| Nr kat.  | Nazwa modułu   | W         |            | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem modul |            |
|--|--|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|  |  | h         | ECTS       | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB029878  | Seminarium dyplomowe                                     | 0         | 0          | 0         | 0         | 0         | 0         | 0         | 0         | 2        | 3        |           | 2           | 3          |
|  | <i>Engineering (BSc) thesis tutorial</i>                 |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB029978  | Praca dyplomowa inżynierska                              |           |            |           |           |           |           |           |           |          |          |           | 6           | 17         |
|  | <i>Engineering (BSc) thesis</i>                          |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB029778  | Praktyka zawodowa  |           |            |           |           |           |           |           |           |          |          |           |             | 7          |
|  | <i>Industrial internship</i>                             |           |            |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku GIH2:</b> |  | 2         | 2          | 0         | 0         | 0         | 0         | 0         | 0         | 0        | 0        |           | 2           | 2          |
| BDB020178  | Kubaturowe budownictwo podziemne                         |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Underground building structures</i>                   |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020278  | Technologie bezwykopowe                                  |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Trenchless technology</i>                             |           |            |           |           |           |           |           |           |          |          |           |             |            |
| BDB020378  | Nowoczesne technologie w geoinżynierii                   |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Modern technology in geo-engineering</i>              |           |            |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku J:</b>    |  | 1         | 1          | 0         | 0         | 0         | 0         | 0         | 0         | 0        | 0        |           | 1           | 1          |
| EKZ001133  | Ekonomiczne i prawne otoczenie przedsiębiorstwa          |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>The economic and legal environments of enterprise</i> |           |            |           |           |           |           |           |           |          |          |           |             |            |
| ZMZ001275  | Podstawy zarządzania                                     |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Essentials of management</i>                          |           |            |           |           |           |           |           |           |          |          |           |             |            |
| EKZ001134  | Ekonomika przedsiębiorstwa                               |           |            |           |           |           |           |           |           |          |          |           |             |            |
|  | <i>Business economics</i>                                |           |            |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>                        |  | <b>3</b>  | <b>3</b>   | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>0</b>  | <b>2</b> | <b>3</b> | <b>0</b>  | <b>5</b>    | <b>30</b>  |
| <b>Razem narastająco:</b>                        |  | <b>83</b> | <b>105</b> | <b>26</b> | <b>27</b> | <b>24</b> | <b>27</b> | <b>32</b> | <b>50</b> | <b>5</b> | <b>7</b> | <b>20</b> | <b>170</b>  | <b>240</b> |

w 83.0 48.8%  
a+l+p+s 87.0 51.2%  
  
a 26.0 15.3%  
l 24.0 14.1%  
p 32.0 18.8%  
s 5.0 2.9%

CNPS 6480 h  
ZZU 1700 h  
1 ECTS 27 h

(WF – 8 ZZU, 1 ECTS, 8 CNPS)

CNPS

E – obowiązuje egzamin

GK – grupa kursów ( jedno łączne zaliczenie modułu)

Na wszystkich specjalnościach obowiązuje zaliczenie 3-miesięcznej praktyki zawodowej za 7 pkt (liczonych w sumie 240 pkt) - realizacja w okresach wakacyjnych po II lub III roku. Miejsce praktyki (przedsiębiorstwo) wybiera student.

<sup>1)</sup> Student jest zobowiązany zrealizować język obcy w wymiarze 8h/5 ECTS, zasadniczo na poziomie B2/1 i B2/2.

Jeżeli zna już język obcy na odpowiednim poziomie, może to być zastąpione np. poziomami B2/2 i C1.

Jeżeli ma kłopoty z językiem obcym (przed zapisami musi wypełnić odpowiedni test w celu ustalenia poziomu znajomości języka obcego), to będzie musiał najpierw zapisać się na kurs wyrównawczy (poza 8 h obowiązkowych zajęć).

**PLAN STUDIÓW NIESTACJONARNYCH**

**INŻYNIERIA LĄDOWA [ILB]**

**CIVIL ENGINEERING**

Zestaw modułów obowiązkowych i wybieralnych w układzie semestralnym

Opiekun specjalności: prof. dr hab. inż. Ryszard KUTYŁOWSKI

Rok I, semestr 1

| Nr kat.                            | Nazwa modułu                              | W         |           | A        |          | L        |          | P        |          | S        |          | E/GK     | Razem moduł |           |
|------------------------------------|---|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|-----------|
|                                    |   | h         | ECTS      | h        | ECTS     | h        | ECTS     | h        | ECTS     | h        | ECTS     |          | h           | ECTS      |
| MAT001465                          | Algebra z geometrią analityczną           | 2         | 2         | 1        | 2        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 3           | 4         |
|                                    | <i>Algebra and analytical geometry</i>    |           |           |          |          |          |          |          |          |          |          |          |             |           |
| MAT001471                          | Analiza matematyczna 1.1 A                | 2         | 5         | 2        | 3        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 4           | 8         |
|                                    | <i>Mathematical analysis 1.1.A</i>        |           |           |          |          |          |          |          |          |          |          |          |             |           |
| FZP002211                          | Fizyka 1.1                                | 2         | 4         | 1        | 1        | 0        | 0        | 0        | 0        | 0        | 0        | E        | 3           | 5         |
|                                    | <i>Physics 1.1</i>                        |           |           |          |          |          |          |          |          |          |          |          |             |           |
| AUA108652                          | Geometria wykreślna                       | 2         | 3         | 1        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | GK       | 3           | 3         |
|                                    | <i>Descriptive geometry</i>               |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB000671                          | Rysunek techniczny                        | 0         | 0         | 1        | 1        | 0        | 0        | 1        | 1        | 0        | 0        |          | 2           | 2         |
|                                    | <i>Technical drawing</i>                  |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB000771                          | Technologie informacyjne                  | 1         | 1         | 0        | 0        | 2        | 2        | 0        | 0        | 0        | 0        |          | 3           | 3         |
|                                    | <i>Information technology</i>             |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB000871                          | Chemia materiałów budowlanych             | 2         | 2         | 0        | 0        | 1        | 1        | 0        | 0        | 0        | 0        |          | 3           | 3         |
|                                    | <i>Chemistry of building materials</i>    |           |           |          |          |          |          |          |          |          |          |          |             |           |
| <b>Moduł wybieralny z bloku A:</b> |   | 2         | 2         | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |          | 2           | 2         |
| BDB000971                          | Środowisko naturalne człowieka            |           |           |          |          |          |          |          |          |          |          |          |             |           |
|                                    | <i>Natural environment of human being</i> |           |           |          |          |          |          |          |          |          |          |          |             |           |
| BDB001071                          | Budownictwo i ekologia                    |           |           |          |          |          |          |          |          |          |          |          |             |           |
|                                    | <i>Building and ecology</i>               |           |           |          |          |          |          |          |          |          |          |          |             |           |
| <b>Razem w semestrze:</b>          |   | <b>13</b> | <b>19</b> | <b>6</b> | <b>7</b> | <b>3</b> | <b>3</b> | <b>1</b> | <b>1</b> | <b>0</b> | <b>0</b> | <b>3</b> | <b>23</b>   | <b>30</b> |

## Rok I, semestr 2

| Nr kat.                                       | Nazwa modułu  | W  |      | A  |      | L |      | P |      | S |      | E/GK | Razem moduł |      |
|---|---|----|------|----|------|---|------|---|------|---|------|------|-------------|------|
|   |   | h  | ECTS | h  | ECTS | h | ECTS | h | ECTS | h | ECTS |      | h           | ECTS |
| MAT001475                                     | Analiza matematyczna 2.1 A                          | 2  | 4    | 2  | 3    | 0 | 0    | 0 | 0    | 0 | 0    | E    | 4           | 7    |
|   | <i>Mathematical analysis 2.1.A</i>                  |    |      |    |      |   |      |   |      |   |      |      |             |      |
| FZP002212                                     | Fizyka 2.1  | 2  | 4    | 0  | 0    | 1 | 1    | 0 | 0    | 0 | 0    | E    | 3           | 5    |
|   | <i>Physics 2.1</i>                                  |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000172                                     | Mechanika ogólna                                    | 2  | 2    | 1  | 1    | 0 | 0    | 0 | 0    | 0 | 0    | E    | 3           | 3    |
|   | <i>General mechanics</i>                            |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000272                                     | Geologia inżynierska                                | 1  | 1    | 1  | 1    | 1 | 1    | 0 | 0    | 0 | 0    |      | 3           | 3    |
|   | <i>Engineering geology</i>                          |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000372                                     | Geodezja  | 1  | 1    | 0  | 0    | 0 | 0    | 2 | 2    | 0 | 0    |      | 3           | 3    |
|   | <i>Geodesy</i>                                      |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000472                                     | Materiały budowlane                                 | 2  | 2    | 0  | 0    | 2 | 2    | 0 | 0    | 0 | 0    | E    | 4           | 4    |
|   | <i>Building materials</i>                           |    |      |    |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku B:</b> |   | 0  | 0    | 0  | 0    | 2 | 3    | 0 | 0    | 0 | 0    |      | 2           | 3    |
| BDB000572                                     | Komputerowe wspomaganie kreślenia – kurs podstawowy |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Computer aided design – basic level</i>          |    |      |    |      |   |      |   |      |   |      |      |             |      |
| BDB000672                                     | Zaawansowane komputerowe wspomaganie kreślenia      |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Computer aided design – advanced level</i>       |    |      |    |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku C:</b> |   | 2  | 2    | 0  | 0    | 0 | 0    | 0 | 0    | 0 | 0    |      | 2           | 2    |
| SCH000214                                     | Socjologia organizacji i kierowania                 |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Sociology of organization and leadership</i>     |    |      |    |      |   |      |   |      |   |      |      |             |      |
| PSZ001123                                     | Psychologia zarządzania zespołami                   |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Team management psychology</i>                   |    |      |    |      |   |      |   |      |   |      |      |             |      |
| PSZ001124                                     | Zarządzanie zespołem pracowników                    |    |      |    |      |   |      |   |      |   |      |      |             |      |
|   | <i>Team of employee management</i>                  |    |      |    |      |   |      |   |      |   |      |      |             |      |
| <b>Razem w semestrze:</b>                     |   | 12 | 16   | 4  | 5    | 6 | 7    | 2 | 2    | 0 | 0    | 4    | 24          | 30   |
| <b>Razem narastająco:</b>                     |   | 25 | 35   | 10 | 12   | 9 | 10   | 3 | 3    | 0 | 0    | 7    | 47          | 60   |



## Rok II, semestr 3

| Nr kat.                   | Nazwa modułu   | W         |           | A         |           | L         |           | P        |          | S        |          | E/GK      | Razem moduł |           |
|---------------------------|--|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|-------------|-----------|
|                           |  | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     | h        | ECTS     |           | h           | ECTS      |
| MAT001506                 | Analiza matematyczna 3   | 2         | 2         | 0         | 0         | 0         | 0         | 0        | 0        | 0        | 0        |           | 2           | 2         |
|                           | <i>Mathematical analysis 3</i>                                   |           |           |           |           |           |           |          |          |          |          |           |             |           |
| MAT001507                 | Statystyka stosowana   | 1         | 2         | 1         | 0         | 0         | 0         | 0        | 0        | 0        | 0        | GK        | 2           | 2         |
|                           | <i>Applied statistics</i>  |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000173                 | Budownictwo ogólne 1   | 2         | 3         | 0         | 0         | 0         | 0         | 2        | 3        | 0        | 0        | E         | 4           | 6         |
|                           | <i>General building engineering 1</i>                            |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000273                 | Wytrzymałość materiałów 1  | 2         | 3         | 2         | 3         | 0         | 0         | 0        | 0        | 0        | 0        | E         | 4           | 6         |
|                           | <i>Strength of materials 1</i>                                   |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000373                 | Podstawy statyki budowli   | 2         | 3         | 0         | 0         | 0         | 0         | 2        | 2        | 0        | 0        | E         | 4           | 5         |
|                           | <i>Introduction to statics of structures</i>                     |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000473                 | Hydraulika i hydrologia  | 1         | 1         | 1         | 1         | 1         | 1         | 0        | 0        | 0        | 0        |           | 3           | 3         |
|                           | <i>Hydraulics and hydrology</i>                                  |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000573                 | Technologia betonów i zapraw                                     | 1         | 1         | 0         | 0         | 2         | 2         | 0        | 0        | 0        | 0        |           | 3           | 3         |
|                           | <i>Technology of concrete and mortars</i>                        |           |           |           |           |           |           |          |          |          |          |           |             |           |
| BDB000673                 | Podstawy projektowania i oddziaływania na konstrukcje budowlane  | 1         | 2         | 1         | 1         | 0         | 0         | 0        | 0        | 0        | 0        |           | 2           | 3         |
|                           | <i>Introduction to design and actions on building structures</i> |           |           |           |           |           |           |          |          |          |          |           |             |           |
| <b>Razem w semestrze:</b> |  | <b>12</b> | <b>17</b> | <b>5</b>  | <b>5</b>  | <b>3</b>  | <b>3</b>  | <b>4</b> | <b>5</b> | <b>0</b> | <b>0</b> | <b>3</b>  | <b>24</b>   | <b>30</b> |
| <b>Razem narastająco:</b> |  | <b>37</b> | <b>52</b> | <b>15</b> | <b>17</b> | <b>12</b> | <b>13</b> | <b>7</b> | <b>8</b> | <b>0</b> | <b>0</b> | <b>10</b> | <b>71</b>   | <b>90</b> |

## Rok II, semestr 4

| Nr kat.                                       | Nazwa modułu                              | W         |           | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem moduł |            |
|---|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|   |   | h         | ECTS      | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| BDB000174                                     | Budownictwo ogólne 2                      | 2         | 3         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        | E         | 3           | 5          |
|   | <i>General building engineering 2</i>     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000274                                     | Konstrukcje betonowe – podstawy           | 2         | 2         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 3           | 4          |
|   | <i>Concrete structures – fundamentals</i> |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000374                                     | Konstrukcje metalowe – podstawy           | 2         | 2         | 0         | 0         | 1         | 1         | 0         | 0         | 0        | 0        |           | 3           | 3          |
|   | <i>Metal structures – fundamentals</i>    |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000474                                     | Statyka budowli                           | 3         | 3         | 0         | 0         | 2         | 3         | 0         | 0         | 0        | 0        | E         | 5           | 6          |
|   | <i>Structural statics</i>                 |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000574                                     | Wytrzymałość materiałów 2                 | 2         | 3         | 0         | 0         | 1         | 1         | 1         | 2         | 0        | 0        | E         | 4           | 6          |
|   | <i>Strength of materials 2</i>            |           |           |           |           |           |           |           |           |          |          |           |             |            |
| BDB000674                                     | Mechanika gruntów                         | 2         | 3         | 0         | 0         | 1         | 1         | 1         | 2         | 0        | 0        | E         | 4           | 6          |
|   | <i>Soil mechanics</i>                     |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku W:</b> |   | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0        | 0        |           | 0           | 0          |
| WFW02000BK                                    | Zajęcia sportowe – wybór sekcji           |           |           |           |           |           |           |           |           |          |          |           |             |            |
|   | <i>Optional sports</i>                    |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>                     |   | <b>13</b> | <b>16</b> | <b>0</b>  | <b>0</b>  | <b>5</b>  | <b>6</b>  | <b>4</b>  | <b>8</b>  | <b>0</b> | <b>0</b> | <b>4</b>  | <b>22</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>                     |   | <b>50</b> | <b>68</b> | <b>15</b> | <b>17</b> | <b>17</b> | <b>19</b> | <b>11</b> | <b>16</b> | <b>0</b> | <b>0</b> | <b>14</b> | <b>93</b>   | <b>120</b> |

## Rok III, semestr 5

| Nr kat.  | Nazwa modułu  | W         |           | A         |           | L         |           | P         |           | S        |          | E/GK      | Razem moduł |            |
|--|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-------------|------------|
|  |   | h         | ECTS      | h         | ECTS      | h         | ECTS      | h         | ECTS      | h        | ECTS     |           | h           | ECTS       |
| <b>BDB000175</b>   | Konstrukcje betonowe – elementy i hale<br><i>Concrete structures – elements and halls</i>   | 3         | 4         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 5           | 7          |
| <b>BDB000275</b>   | Konstrukcje metalowe – elementy i hale<br><i>Metal structures – elements and halls</i>      | 3         | 4         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 5           | 7          |
| <b>BDB000375</b>   | Budownictwo wodne - podstawy<br><i>Fundamentals of hydro-engineering structures</i>         | 1         | 1         | 0         | 0         | 0         | 0         | 1         | 2         | 0        | 0        |           | 2           | 3          |
| <b>BDB000475</b>   | Fundamentowanie<br><i>Foundation engineering</i>  | 2         | 2         | 0         | 0         | 0         | 0         | 2         | 3         | 0        | 0        | E         | 4           | 5          |
| <b>BDB000575</b>   | Podstawy dynamiki budowli<br><i>Introduction to dynamics of structures</i>                  | 1         | 1         | 1         | 2         | 0         | 0         | 0         | 0         | 0        | 0        |           | 2           | 3          |
| <b>Zestaw modułów wybieralnych z bloku D:</b>                              |   | 1         | 1         | 0         | 0         | 1         | 2         | 0         | 0         | 0        | 0        |           | 2           | 3          |
| <b>BDB000675</b>   | Metody obliczeniowe<br><i>Computational methods</i>   |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>BDB000775</b>   | Metody numeryczne w mechanice<br><i>Numerical methods in mechanics</i>                      |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Zestaw modułów wybieralnych z bloku E (wybór języka i/lub poziomu):</b> |   | 0         | 0         | 4         | 2         | 0         | 0         | 0         | 0         | 0        | 0        |           | 4           | 2          |
| <b>JZB158331BK</b>   | Język obcy – poziom B2/1 <sup>1)</sup><br><i>Foreign language – level B2/1<sup>1)</sup></i> |           |           |           |           |           |           |           |           |          |          |           |             |            |
| <b>Razem w semestrze:</b>  |   | <b>11</b> | <b>13</b> | <b>5</b>  | <b>4</b>  | <b>1</b>  | <b>2</b>  | <b>7</b>  | <b>11</b> | <b>0</b> | <b>0</b> | <b>3</b>  | <b>24</b>   | <b>30</b>  |
| <b>Razem narastająco:</b>  |   | <b>61</b> | <b>81</b> | <b>20</b> | <b>21</b> | <b>18</b> | <b>21</b> | <b>18</b> | <b>27</b> | <b>0</b> | <b>0</b> | <b>17</b> | <b>117</b>  | <b>150</b> |

## Rok III, semestr 6

| Nr kat.                                       | Nazwa modułu  | W |      | A |      | L |      | P |      | S |      | E/GK | Razem moduł |      |
|---|---|---|------|---|------|---|------|---|------|---|------|------|-------------|------|
|   |   | h | ECTS | h | ECTS | h | ECTS | h | ECTS | h | ECTS |      | h           | ECTS |
| BDB000476                                     | Technologia robót budowlanych   | 2 | 2    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 3           | 4    |
|   | <i>Building construction technology</i>                                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000576                                     | Fizyka budowli  | 2 | 2    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 3           | 4    |
|   | <i>Building physics</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000676                                     | Ekonomika budownictwa   | 1 | 1    | 0 | 0    | 1 | 1    | 0 | 0    | 0 | 0    |      | 2           | 2    |
|   | <i>Construction economics</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000776                                     | Zagadnienia bezpieczeństwa pracy  | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 1 | 1    |      | 2           | 2    |
|   | <i>Health and safety in constructions</i>                               |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000876                                     | Koleje – podstawy   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Railways – fundamentals</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000976                                     | Podstawy mostownictwa   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Introduction to bridge engineering</i>                               |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB001076                                     | Drogi i ulice – podstawy  | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 2    | 0 | 0    |      | 2           | 3    |
|   | <i>Roads and streets – fundamentals</i>                                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
| ELR000276                                     | Instalacje elektryczne  | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 0 | 0    |      | 1           | 1    |
|   | <i>Electrical systems</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku F:</b> |   | 0 | 0    | 4 | 3    | 0 | 0    | 0 | 0    | 0 | 0    |      | 4           | 3    |
| JZB146156BK                                   | Język obcy – poziom B2/2 <sup>1)</sup>                                  |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Foreign language – level B2/2<sup>1)</sup></i>                       |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku G:</b> |   | 1 | 2    | 0 | 0    | 0 | 0    | 1 | 1    | 0 | 0    |      | 2           | 3    |
| BDB001176                                     | Podstawy inżynierii miejskiej i budownictwa podziemnego                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Introduction to municipal engineering and underground structures</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB001276                                     | Podstawy budownictwa podziemnego i inżynierii miejskiej                 |   |      |   |      |   |      |   |      |   |      |      |             |      |
|   | <i>Introduction to underground structures and municipal engineering</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |

| <b>Zestaw modułów wybieralnych z bloku H:</b> |  | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 1        | 2        |           | 1          | 2          |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|------------|------------|
| <b>FLH020476</b>                              | Wprowadzenie do filozofii                                      |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Introduction to philosophy</i>                              |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>FLH020576</b>                              | Filozofia techniki i estetyka nowych technologii               |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Philosophy of technics and aesthetics of new technology</i> |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>FLH020676</b>                              | Filozofia społeczna  |           |           |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Social philosophy</i>                                       |           |           |           |           |           |           |           |           |          |          |           |            |            |
| <b>Razem w semestrze:</b>                     |  | <b>11</b> | <b>12</b> | <b>4</b>  | <b>3</b>  | <b>1</b>  | <b>1</b>  | <b>6</b>  | <b>11</b> | <b>2</b> | <b>3</b> | <b>0</b>  | <b>24</b>  | <b>30</b>  |
| <b>Razem narastająco:</b>                     |  | <b>72</b> | <b>93</b> | <b>24</b> | <b>24</b> | <b>19</b> | <b>22</b> | <b>24</b> | <b>38</b> | <b>2</b> | <b>3</b> | <b>17</b> | <b>141</b> | <b>180</b> |

Rok IV, semestr 7

| Nr kat.  | Nazwa modułu  | W |      | A |      | L |      | P |      | S |      | E/GK | Razem moduł |      |
|--|---|---|------|---|------|---|------|---|------|---|------|------|-------------|------|
|  |   | h | ECTS | h | ECTS | h | ECTS | h | ECTS | h | ECTS |      | h           | ECTS |
| BDB000477  | Organizacja produkcji budowlanej i kierowanie procesami inwestycyjnymi              | 2 | 2    | 2 | 3    | 0 | 0    | 0 | 0    | 0 | 0    |      | 4           | 5    |
|  | <i>Principles of construction organisation and management of investment process</i> |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB000577  | Prawo budowlane   | 1 | 1    | 0 | 0    | 0 | 0    | 0 | 0    | 1 | 1    |      | 2           | 2    |
|  | <i>Civil engineering law regulations</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB030177  | Drogi, ulice, węzły   | 2 | 2    | 0 | 0    | 0 | 0    | 2 | 3    | 0 | 0    | E    | 4           | 5    |
|  | <i>Roads, streets, junctions</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB030277  | Mosty   | 2 | 3    | 0 | 0    | 0 | 0    | 2 | 3    | 0 | 0    | E    | 4           | 6    |
|  | <i>Bridges</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB030377  | Koleje  | 1 | 1    | 0 | 0    | 0 | 0    | 2 | 3    | 0 | 0    |      | 3           | 4    |
|  | <i>Railways</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB030477  | Inżynieria miejska  | 1 | 1    | 0 | 0    | 0 | 0    | 2 | 3    | 0 | 0    | E    | 3           | 4    |
|  | <i>Municipal engineering</i>  |   |      |   |      |   |      |   |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku ILB1:</b> |   | 1 | 1    | 0 | 0    | 1 | 1    | 0 | 0    | 0 | 0    |      | 2           | 2    |
| BDB030577  | Technologia budowy dróg (D)   |   |      |   |      |   |      |   |      |   |      |      |             |      |
|  | <i>Road building technology</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB030677  | Technologia budowy mostów (M)   |   |      |   |      |   |      |   |      |   |      |      |             |      |
|  | <i>Bridge building technology</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
|  |   | 1 | 1    | 0 | 0    | 0 | 0    | 1 | 1    | 0 | 0    |      | 2           | 2    |
| BDB030777  | Koleje miejskie (DK)  |   |      |   |      |   |      |   |      |   |      |      |             |      |
|  | <i>Urban railways</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |
| BDB030877  | Budownictwo podziemne (IM)  |   |      |   |      |   |      |   |      |   |      |      |             |      |
|  | <i>Underground structures</i>   |   |      |   |      |   |      |   |      |   |      |      |             |      |

|   |  |           |            |           |           |           |           |           |           |          |          |           |            |            |
|---|--|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|------------|------------|
| <b>Zestaw modułów wybieralnych z bloku I:</b> |  | 1         | 1          | 0         | 0         | 0         | 0         | 1         | 1         | 0        | 0        |           | 2          | 2          |
| <b>ISS303129</b>                              | Instalacje sanitarne                   |           |            |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Sanitary systems</i>                |           |            |           |           |           |           |           |           |          |          |           |            |            |
| <b>BDB000677</b>                              | Urządzenia wodno-kanalizacyjne         |           |            |           |           |           |           |           |           |          |          |           |            |            |
|   | <i>Water-supply and sewage systems</i> |           |            |           |           |           |           |           |           |          |          |           |            |            |
| <b>Razem w semestrze (D, M):</b>              |  | <b>11</b> | <b>12</b>  | <b>2</b>  | <b>3</b>  | <b>1</b>  | <b>1</b>  | <b>9</b>  | <b>13</b> | <b>1</b> | <b>1</b> | <b>3</b>  | <b>24</b>  | <b>30</b>  |
| <b>Razem w semestrze (DK, IM):</b>            |  | <b>11</b> | <b>12</b>  | <b>2</b>  | <b>3</b>  | <b>0</b>  | <b>0</b>  | <b>10</b> | <b>14</b> | <b>1</b> | <b>1</b> | <b>3</b>  | <b>24</b>  | <b>30</b>  |
| <b>Razem narastająco (D, M):</b>              |  | <b>83</b> | <b>105</b> | <b>26</b> | <b>27</b> | <b>20</b> | <b>23</b> | <b>33</b> | <b>51</b> | <b>3</b> | <b>4</b> | <b>20</b> | <b>165</b> | <b>210</b> |
| <b>Razem narastająco (DK, IM):</b>            |  | <b>83</b> | <b>105</b> | <b>26</b> | <b>27</b> | <b>19</b> | <b>22</b> | <b>34</b> | <b>52</b> | <b>3</b> | <b>4</b> | <b>20</b> | <b>165</b> | <b>210</b> |

Rok IV, semestr 8

| Nr kat.  | Nazwa modułu   | W  |      | A  |      | L  |      | P  |      | S |      | E/GK | Razem moduł |      |
|--|--|----|------|----|------|----|------|----|------|---|------|------|-------------|------|
|  |  | h  | ECTS | h  | ECTS | h  | ECTS | h  | ECTS | h | ECTS |      | h           | ECTS |
| BDB039878  | Seminarium dyplomowe                                     | 0  | 0    | 0  | 0    | 0  | 0    | 0  | 0    | 2 | 3    |      | 2           | 3    |
|  | <i>Engineering (BSc) thesis tutorial</i>                 |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB039978  | Praca dyplomowa inżynierska                              |    |      |    |      |    |      |    |      |   |      |      | 6           | 17   |
|  | <i>Engineering (BSc) thesis</i>                          |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB039778  | Praktyka zawodowa  |    |      |    |      |    |      |    |      |   |      |      |             | 7    |
|  | <i>Industrial internship</i>                             |    |      |    |      |    |      |    |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku ILB2:</b> |  | 1  | 1    | 0  | 0    | 0  | 0    | 1  | 1    | 0 | 0    |      | 2           | 2    |
| BDB030178  | Utrzymanie dróg (D)                                      |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Maintenance of roads</i>                              |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB030278  | Utrzymanie mostów (M)                                    |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Maintenance of bridges</i>                            |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB030378  | Sterowanie ruchem i technologia robót kolejowych (DK)    |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Train operations and technology of railways works</i> |    |      |    |      |    |      |    |      |   |      |      |             |      |
| BDB030478  | Inżynieria miejska – wybrane zagadnienia (IM)            |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Municipal engineering – the selected issues</i>       |    |      |    |      |    |      |    |      |   |      |      |             |      |
| <b>Zestaw modułów wybieralnych z bloku J:</b>    |  | 1  | 1    | 0  | 0    | 0  | 0    | 0  | 0    | 0 | 0    |      | 1           | 1    |
| EKZ001133  | Ekonomiczne i prawne otoczenie przedsiębiorstwa          |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>The economic and legal environments of enterprise</i> |    |      |    |      |    |      |    |      |   |      |      |             |      |
| ZMZ001275  | Podstawy zarządzania                                     |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Essentials of management</i>                          |    |      |    |      |    |      |    |      |   |      |      |             |      |
| EKZ001134  | Ekonomika przedsiębiorstwa                               |    |      |    |      |    |      |    |      |   |      |      |             |      |
|  | <i>Business economics</i>                                |    |      |    |      |    |      |    |      |   |      |      |             |      |
| <b>Razem w semestrze:</b>                        |  | 2  | 2    | 0  | 0    | 0  | 0    | 1  | 1    | 2 | 3    | 0    | 5           | 30   |
| <b>Razem narastająco (D, M):</b>                 |  | 85 | 107  | 26 | 27   | 20 | 23   | 34 | 52   | 5 | 7    | 20   | 170         | 240  |
| <b>Razem narastająco (DK, IM):</b>               |  | 85 | 107  | 26 | 27   | 19 | 22   | 35 | 53   | 5 | 7    | 20   | 170         | 240  |



|         | (D, M) |       | (DK, IM) |       |        |        |   |
|---------|--------|-------|----------|-------|--------|--------|---|
| w       | 85.0   | 50.0% | 85.0     | 50.0% | CNPS   | 6480 h | <del>(WF – 8 ZZU, 1 ECTS, 8 CNPS)</del> |
| a+l+p+s | 85.0   | 50.0% | 85.0     | 50.0% | ZZU    | 1700 h |   |
|         |        |       |          |       | 1 ECTS | 27 h   | CNPS                                    |
| a       | 26.0   | 15.3% | 26.0     | 15.3% |        |        |   |
| l       | 20.0   | 11.8% | 19.0     | 11.2% |        |        |   |
| p       | 34.0   | 20.0% | 35.0     | 20.6% |        |        |   |
| s       | 5.0    | 2.9%  | 5.0      | 2.9%  |        |        |   |

E – obowiązuje egzamin

GK – grupa kursów ( jedno łączne zaliczenie modułu)

(D) – profil dyplomowania Drogi

(M) – profil dyplomowania Mosty

(DK) – profil dyplomowania Drogi kolejowe

(IM) – profil dyplomowania Inżynieria miejska i budownictwo podziemne

Na wszystkich specjalnościach obowiązuje zaliczenie 3-miesięcznej praktyki zawodowej za 7 pkt (liczonych w sumie 240 pkt) - realizacja w okresach wakacyjnych po II lub III roku. Miejsce praktyki (przedsiębiorstwo) wybiera student.

<sup>1)</sup> Student jest zobowiązany zrealizować język obcy w wymiarze 8h/5 ECTS, zasadniczo na poziomie B2/1 i B2/2.

Jeżeli zna już język obcy na odpowiednim poziomie, może to być zastąpione np. poziomami B2/2 i C1.

Jeżeli ma kłopoty z językiem obcym (przed zapisami musi wypełnić odpowiedni test w celu ustalenia poziomu znajomości języka obcego), to będzie musiał najpierw zapisać się na kurs wyrównawczy (poza 8 h obowiązkowych zajęć).

### Zestaw egzaminów w układzie semestralnym

| Lp. | Kod kursu        | Nazwa kursów kończących się egzaminem  | Semestr |
|-----|------------------|--|---------|
| 1   | <b>MAT001465</b> | Algebra z geometrią analityczną.<br>Algebra and analytical geometry              | 1       |
| 2   | <b>MAT001471</b> | Analiza matematyczna 1.1 A<br>Mathematical analysis 1.1.A                        | 1       |
| 3   | <b>FZP002211</b> | Fizyka 1.1. Physics 1  | 1       |
| 4   | <b>MAT001475</b> | Analiza matematyczna 2.1 A.<br>Mathematical analysis 2.1.A                       | 2       |
| 5   | <b>FZP002212</b> | Fizyka 2.1. Physics 2  | 2       |
| 6   | <b>BDB000172</b> | Mechanika ogólna. General mechanics  | 2       |
| 7   | <b>BDB000472</b> | Materiały budowlane. Building materials  | 2       |
| 8   | <b>BDB000173</b> | Budownictwo ogólne 1. General building engineering 1                             | 3       |
| 9   | <b>BDB000273</b> | Wytrzymałość materiałów 1.<br>Strength of materials 1                            | 3       |
| 10  | <b>BDB000373</b> | Podstawy statyki budowli.<br>Introduction to statics of structures               | 3       |
| 11  | <b>BDB000174</b> | Budownictwo ogólne 2. General building engineering 2                             | 4       |
| 12  | <b>BDB000474</b> | Statyka budowli. Structural statics  | 4       |
| 13  | <b>BDB000574</b> | Wytrzymałość materiałów 2.<br>Strength of materials 2                            | 4       |
| 14  | <b>BDB000674</b> | Mechanika gruntów. Soil mechanics  | 4       |
| 15  | <b>BDB000175</b> | Konstrukcje betonowe - elementy i hale. Concrete structures - elements and halls | 5       |

|  |                  |   |   |
|--|------------------|---|---|
| 16   | <b>BDB000275</b> | Konstrukcje metalowe - elementy i hale. Metal structures - elements and halls | 5 |
| 17   | <b>BDB000475</b> | Fundamentowanie. Foundation engineering                                       | 5 |
| <b>Specjalność: Inżynieria budowlana</b>                   |                  |   |   |
| 18   | <b>BDB010177</b> | Konstrukcje betonowe - obiekty. Concrete structures - objects                 | 7 |
| 19   | <b>BDB010277</b> | Konstrukcje metalowe - obiekty. Metal structures - objects                    | 7 |
| 20   | <b>BDB010377</b> | Budownictwo przemysłowe. Industrial building                                  | 7 |
| <b>Specjalność: Inżynieria Geotechnika i Hydrotechnika</b> |                  |   |   |
| 18   | <b>BDB020177</b> | Budownictwo podziemne. Underground structures                                 | 7 |
| 19   | <b>BDB020277</b> | Budownictwo ziemne. Earth engineering   | 7 |
| 20   | <b>BDB020377</b> | Fundamentowanie - głębokie wykopy. Foundation engineering - deep excavations  | 7 |
| <b>Specjalność: Inżynieria Lądowa</b>                      |                  |   |   |
| 18   | <b>BDB030177</b> | Drogi, ulice, węzły. Roads, streets, junctions                                | 7 |
| 19   | <b>BDB030277</b> | Mosty. Bridges  | 7 |
| 20   | <b>BDB030477</b> | Inżynieria miejska. Municipal engineering                                     | 7 |

### Dopuszczalny deficyt punktów po poszczególnych semestrach

| Semestr | Dopuszczalny deficyt punktów<br>po semestrze | Wymagana suma punktów do<br>wpisu na następny semestr |
|---------|--|---|
| I       | 11   | 19  |
| II      | 17   | 43  |
| III     | 15   | 73  |
| IV      | 15   | 98  |
| V       | 15   | 120   |
| VI      | 13   | 146   |
| VII     | 10   | 174   |

## Moduły blokowane

| Moduł   | Warunkiem wpisu na moduł z kol. 1 jest zrealizowanie kursów |         |
|---|---|---------|
| <b>Semestr 2</b>  |   |         |
| ANALIZA MATEMATYCZNA 2  | Analiza matematyczna 1                                      | WE i A  |
| FIZYKA 2  | Fizyka 1  | WE i A  |
| <b>Semestr 3</b>  |   |         |
| STATYSTYKA STOSOWANA  | Analiza matematyczna 2                                      | WE i A  |
| ANALIZA MATEMATYCZNA 3  | Analiza matematyczna 2                                      | WE i A  |
| PODSTAWY STATYKI BUDOWLI  | Mechanika ogólna  | WE i A  |
| <b>Semestr 4</b>  |   |         |
| STATYKA BUDOWLI   | Podstawy statyki budowli                                    | WE i P  |
| WYTRZYMAŁOŚĆ MATERIAŁÓW 2   | Wytrzymałość materiałów 1                                   | WE i A  |
| BUDOWNICTWO OGÓLNE 2  | Budownictwo ogólne 1  | WE i P  |
| KONSTRUKCJE BETONOWE - PODSTAWY   | Podstawy statyki budowli                                    | WE i P* |
|   | Wytrzymałość materiałów 1                                   | WE i A* |
| KONSTRUKCJE METALOWE - PODSTAWY   | Podstawy statyki budowli                                    | WE i P* |
|   | Wytrzymałość materiałów 1                                   | WE i A* |
| *student może być dopuszczony do wpisu, gdy ma zaliczenie jednego z tych modułów  |   |         |
| <b>Warunkiem bezwzględnym (niezależnym od wielkości deficytu punktów ECTS) wpisu na sem. 5 (WE i P) jest zaliczenie modułu „Podstawy statyki budowli”</b> |   |         |
| <b>Semestr 5</b>  |   |         |
| FUNDAMENTOWANIE   | Mechanika gruntów   | P       |
| PODSTAWY DYNAMIKI BUD.  | Podstawy statyki budowli                                    | WE i P  |
| KONSTR. BETONOWE – ELEMENTY I HALE  | Konstrukcje betonowe – podstawy                             | W i P   |
| KONSTR. METALOWE – ELEMENTY I HALE  | Konstrukcje metalowe – podstawy                             | W i L   |
| <b>Semestr 6</b>  |   |         |
| PODSTAWY MOSTOWNICTWA   | Podstawy statyki budowli                                    | WE i P  |
| Warunkiem wpisu na 7 sem. jest zaliczenie wszystkich wykładów do 6 sem. włącznie kończących się egzaminem   |   |         |
| <b>Semestr 7</b>  |   |         |
| <b>Specjalność dyplomowania Inżynieria Budowlana IBB[1]</b>   |   |         |
| KONSTR. BETONOWE – OBIEKTY  | Konstr. betonowe – elementy i hale                          | WE i P  |
| KONSTR. METALOWE – OBIEKTY  | Konstr. metalowe – elementy i hale                          | WE i P  |
| <b>Specjalność dyplomowania Geotechnika i Hydrotechnika GIH[2]</b>  |   |         |

brak modułów blokowanych

| <b>Specjalność dyplomowania Inżynieria Lądowa ILB[3]</b> |                           |             |
|--|---------------------------|-------------|
| DROGI, ULICE, WĘZŁY                                      | Drogi i ulice - podstawy  | W i P       |
| MOSTY  | Wytrzymałość materiałów 2 | W E i L i P |
|  | Podstawy mostownictwa     | W i P       |
| KOLEJE   | Koleje - podstawy         | W i P       |

Uchwała Rady Wydziału nr 387/20/2016-2020 z dnia 25.04.2018 r.

Obowiązuje od 1.10.2018 r.

Opinia wydziałowego organu uchwałodawczego samorządowego studenckiego:

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Data \_\_\_\_\_ Imię, nazwisko i podpis przedstawiciela studentów \_\_\_\_\_

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Data \_\_\_\_\_ Podpis Dziekana \_\_\_\_\_