

Akademia im. Jana Długosza w Częstochowie  
 Kierunek studiów: informatyka  
 Specjalność: grafika komputerowa i multimedia  
 Poziom studiów: pierwszy stopień  
 Forma studiów: studia stacjonarne  
 Rok akademicki 2014/2015

W toku studiów obowiązują:

- a) praktyki ciągłe: 4-tygodniowe po 6 semestrze,  
 b) egzamin dyplomowy po ukończeniu 7 semestru.  
 CKL – oznacza ćwiczenia, konwersatoria, laboratoria

| L.p.                                   | Nazwa Modułu/Przedmiot                  | egzamin po semestrze | razem godz. | rodzaj zajęć |           |               |             |           |                   |             | I rok   |           |     | II rok |           |      | III rok |           |      | IV rok |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
|--|---|----------------------|-------------|--------------|-----------|---------------|-------------|-----------|-------------------|-------------|---------|-----------|-----|--------|-----------|------|---------|-----------|------|--------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|------|-------|-------|
|  |   |                      |             | wykłady      | ćwiczenia | konwersatoria | laboratoria | seminaria | Praktyki zawodowe | Konsultacje | egzamin | 1 semestr |     |        | 2 semestr |      |         | 3 semestr |      |        | 4 semestr |       |       | 5 semestr |       |       | 6 semestr |       |       | 7 semestr |       |       |      |       |       |
|  |   |                      |             |              |           |               |             |           |                   |             |         | wykł.     | ćw. | kon.   | lab.      | sem. | pr.     | kon.      | egz. | wykł.  | ckl.      | ects. | wykł. | ckl.      | ects. | wykł. | ckl.      | ects. | wykł. | ckl.      | ects. | wykł. | ckl. | ects. | wykł. |
| <b>Przedmioty Kształcenia Ogólnego</b> |   |                      |             |              |           |               |             |           |                   |             |         |           |     |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M01                         | Język angielski                         | 5                    | 120         |              |           |               | 120         |           |                   | 12          |         |           |     | 2      | 2         |      | 2       | 2         |      | 2      | 2         |       |       |           | 2     | 4     |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M02                         | Wychowanie fizyczne                     |                      | 30          |              | 30        |               |             |           |                   |             |         |           |     |        |           |      | 2       | 2         |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M03                         | Podstawy prawno-etyczne                 |                      | 15          |              |           |               | 15          |           |                   | 2           |         | 1         | 1   |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M04                         | Podstawy ekonomii                       |                      | 15          | 15           |           |               |             |           |                   | 2           | 1       |           | 1   |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| <b>Razem</b>                           |   |                      | 180         | 15           | 30        |               | 135         |           |                   | 16          | 1       | 1         | 2   |        |           |      | 4       | 4         |      |        |           |       |       |           | 2     | 4     |           |       |       |           |       |       |      |       |       |
| <b>Grupa treści podstawowych I</b>     |   |                      |             |              |           |               |             |           |                   |             |         |           |     |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M05                         | Repetytorium z matematyki               |                      | 30          |              |           | 30            |             |           |                   | 3           |         | 2         | 2   |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M06                         | Wstęp do logiki i teorii mnogości       | 1                    | 60          | 30           |           | 30            |             |           |                   | 6           | 2       | 2         | 6   |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M07                         | Matematyka dyskretna                    | 2                    | 60          | 30           |           | 30            |             |           |                   | 6           |         |           |     | 2      | 2         | 5    |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M08                         | Algebra liniowa z geometrią analityczną | 1                    | 60          | 30           |           | 30            |             |           |                   | 6           | 2       | 2         | 6   |        |           |      |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M09                         | Analiza matematyczna                    | 2                    | 60          | 30           |           | 30            |             |           |                   | 6           |         |           |     | 2      | 2         | 6    |         |           |      |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M10                         | Rachunek prawdopodobieństwa             | 3                    | 30          | 15           |           | 15            |             |           |                   | 6           |         |           |     |        |           |      | 1       | 1         | 3    |        |           |       |       |           |       |       |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M11                         | Statystyka                              |                      | 30          | 15           |           | 15            |             |           |                   | 3           |         |           |     |        |           |      |         |           |      |        |           |       |       | 1         | 1     | 2     |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M12                         | Metody numeryczne                       | 6                    | 30          | 15           |           | 15            |             |           |                   | 6           |         |           |     |        |           |      |         |           |      |        |           |       |       |           |       |       |           | 1     | 1     | 3         |       |       |      |       |       |
| WMP_INS100_M13                         | Podstawy fizyki                         |                      | 45          | 15           |           | 30            |             |           |                   | 4           |         |           |     |        |           |      |         |           |      |        |           |       |       | 1         | 2     | 3     |           |       |       |           |       |       |      |       |       |
| WMP_INS100_M14                         | Podstawy elektroniki                    |                      | 30          | 15           |           | 15            |             |           |                   | 3           |         |           |     |        |           |      |         |           |      |        |           |       |       |           |       |       | 1         | 1     | 2     |           |       |       |      |       |       |
| <b>Razem</b>                           |   |                      | 435         | 195          |           | 165           | 75          |           |                   | 49          | 4       | 6         | 14  | 4      | 4         | 11   | 1       | 1         | 3    | 2      | 3         | 5     | 1     | 1         | 2     | 1     | 1         | 3     |       |           |       |       |      |       |       |

| Grupa treści podstawowych II |   |   |     |     |    |    |     |   |     |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
|------------------------------|---|---|-----|-----|----|----|-----|---|-----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|----|---|---|---|
| WMP_INS100_M15               | Środowisko programisty  |   | 30  |     |    | 30 |     |   | 3   |   | 2 | 3  |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M16               | Wstęp do informatyki  | 1 | 45  | 15  | 30 |    |     | 6 | 1   | 2 | 4 |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M17               | Programowanie proceduralne w C++                                    | 2 | 60  | 30  |    | 30 |     | 6 |     |   | 2 | 2  | 5 |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M18               | Programowanie obiektowe w C++                                       | 3 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   | 2 | 2  | 6 |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M19               | Programowanie graficznych interfejsów użytkownika w wybranym języku |   |     |     |    |    |     |   |     |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_P19.1             | Programowanie w C++   |   |     |     |    |    |     |   |     |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_P19.2             | Programowanie w C#  |   | 45  |     | 15 | 30 |     | 4 |     |   |   |    |   |   |    |   |   | 3  | 4 |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_P19.3             | Programowanie w Javie   |   |     |     |    |    |     |   |     |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M20               | Algorytmy i struktury danych  | 4 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   | 2 | 2  | 5 |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M21               | Systemy operacyjne  | 4 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   | 2 | 2  | 5 |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M22               | Architektura komputerów   |   | 30  | 15  |    | 15 |     | 3 |     |   |   | 1  | 1 | 2 |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M23               | Systemy wbudowane   |   | 45  | 15  |    | 30 |     | 4 |     |   |   |    |   |   |    |   |   | 1  | 2 | 3 |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M24               | Programowanie współbieżne i rozproszone                             | 6 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   |   |    |   |   | 2  | 2 | 5 |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M25               | Bazy danych   | 5 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   |   |    |   |   | 2  | 2 | 5 |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M26               | Inżynieria oprogramowania   | 4 | 30  | 15  |    | 15 |     | 6 |     |   |   |    |   | 1 | 1  | 3 |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M27               | Sieci komputerowe   | 2 | 60  | 30  |    | 30 |     | 6 |     |   | 2 | 2  | 5 |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M28               | Podstawy sztucznej inteligencji                                     | 5 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   |   |    |   |   | 2  | 2 | 5 |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M29               | Języki, automaty i obliczenia                                       | 6 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   |   |    |   |   | 2  | 2 | 5 |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M30               | Grafika komputerowa i multimedia                                    | 3 | 60  | 30  |    | 30 |     | 6 |     |   |   | 2  | 2 | 6 |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M31               | Programowanie w wybranym języku                                     |   |     |     |    |    |     |   |     |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_P31.1             | Podstawy programowania w C#   | 4 | 60  | 30  |    | 30 |     | 6 |     |   |   |    |   | 2 | 2  | 6 |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_P31.2             | Podstawy programowania w Javie                                      |   |     |     |    |    |     |   |     |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M32               | Podstawy programowania w Pythonie                                   | 1 | 60  | 30  |    | 30 |     | 6 | 2   | 2 | 5 |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |    |   |   |   |
| WMP_INS100_M33               | Modelowanie komputerowe   |   | 30  | 15  |    | 15 |     | 3 |     |   |   |    |   |   |    |   |   |    |   | 1 |    |   |   |    |   |   |    |   |   |   |
| <b>Razem</b>                 |   |   | 975 | 435 |    | 75 | 465 |   | 101 | 3 | 6 | 12 | 4 | 4 | 10 | 5 | 5 | 14 | 7 | 7 | 19 | 4 | 7 | 14 | 5 | 6 | 13 | 1 | 1 | 2 |

| Grupa treści specjalnościowych |   |   |      |     |    |     |      |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
|--------------------------------|---|---|------|-----|----|-----|------|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|
| WMP_INS1GK_M34                 | Fotografia cyfrowa                            |   | 15   |     |    | 15  |      |     | 2   |     |    |    | 1  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M35                 | Narzędzia grafiki wektorowej i rastrowej      |   | 45   |     |    | 45  |      |     | 4   |     |    |    | 3  | 3  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M36                 | Komputerowy skład tekstu                      |   | 30   |     |    | 30  |      |     | 3   |     |    |    | 2  | 3  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M37                 | Kompozycja obrazu i zarządzanie barwą         |   | 30   |     |    | 30  |      |     | 3   |     |    |    |    |    | 2  | 2  |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M38                 | Geometria obliczeniowa                        | 6 | 60   | 30  |    | 30  |      |     | 6   |     |    |    |    |    |    |    |    | 2  | 2  | 5  |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M39                 | Metody przetwarzania obrazów cyfrowych        | 5 | 60   | 30  |    | 30  |      |     | 6   |     |    |    |    |    |    |    |    | 2  | 2  | 5  |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M40                 | Programowanie grafiki 3D                      |   | 60   |     | 30 | 30  |      |     | 5   |     |    |    |    |    |    |    |    |    |    | 4  | 4  |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M41                 | Kompozycja stron WWW                          |   | 30   |     |    | 30  |      |     | 3   |     |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M42                 | Grafika na potrzeby Internetu                 |   | 45   |     |    | 45  |      |     | 4   |     |    |    |    |    | 3  | 3  |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M43                 | Systemy zarządzania treścią                   |   | 30   |     |    | 30  |      |     | 3   |     |    |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M44                 | Edycja dźwięku i wideo                        |   | 30   |     |    | 30  |      |     | 3   |     |    |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M45                 | Animacja komputerowa                          |   | 45   |     |    | 45  |      |     | 4   |     |    |    |    |    |    |    |    |    | 3  | 3  |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M46                 | Wizualizacja danych                           |   | 30   |     |    | 30  |      |     | 3   |     |    |    |    |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M47                 | Komunikacja człowiek – komputer               |   | 30   | 15  |    | 15  |      |     | 3   |     |    |    |    |    | 1  | 1  | 2  |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M48                 | Przedmiot swobodnego wyboru 1                 |   | 30   | 30  |    |     |      |     | 3   | 2   |    | 2  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M49                 | Przedmiot swobodnego wyboru 2                 |   | 30   | 30  |    |     |      |     | 3   |     |    |    |    |    | 2  |    | 2  |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M50                 | Przedmiot swobodnego wyboru 3                 |   | 30   | 30  |    |     |      |     | 3   |     |    |    |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M51                 | Przedmiot swobodnego wyboru 4                 |   | 15   | 15  |    |     |      |     | 2   |     |    |    |    |    |    |    |    |    |    |    |    | 1  | 1  |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M52                 | Projekt inżynierski                           |   | 30   |     |    | 30  |      |     | 6   |     |    |    |    |    |    |    |    |    |    |    |    | 2  | 3  |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M53                 | Projekt zespołowy                             |   | 30   |     |    | 30  |      |     | 6   |     |    |    |    |    |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |    |   |    |    |
| WMP_INS1GK_M54                 | Seminarium dyplomowe                          |   | 30   |     |    | 30  |      |     | 3   |     |    |    |    |    |    |    |    |    |    |    |    |    | 2  | 2  |    |    |    |    |   |    |    |
| WMP_INS1GK_M55                 | Praca dyplomowa                               |   | 0    |     |    |     |      |     | 60  |     |    |    |    |    |    |    |    |    |    |    |    |    |    | 16 |    |    |    |    |   |    |    |
| WMP_INS1GK_M56                 | Praktyka zawodowa                             |   | 0    |     |    |     |      | 120 | 2   |     |    |    |    |    |    |    |    |    |    |    |    |    |    | 5  |    |    |    |    |   |    |    |
|                                | <b>Razem</b>                                  |   | 735  | 180 | 30 | 495 | 30   | 120 | 140 | 2   | 2  | 6  | 7  | 3  | 6  | 9  | 4  | 4  | 2  | 7  | 10 | 4  | 4  | 14 | 1  | 10 | 28 |    |   |    |    |
|                                | <b>Razem w toku studiów:</b>                  |   | 2325 | 825 | 30 | 270 | 1170 | 30  | 120 | 306 | 10 | 13 | 30 | 8  | 16 | 30 | 9  | 16 | 30 | 9  | 16 | 30 | 7  | 17 | 30 | 10 | 11 | 30 | 2 | 11 | 30 |
|                                | <b>Ilość godzin kontaktowych w semestrze:</b> |   | 2631 |     |    |     |      |     |     | 23  | 24 |    |    | 25 |    |    | 25 |    |    | 24 |    |    | 21 |    |    | 13 |    |    |   |    |    |
|                                | <b>Liczba egzaminów w semestrze:</b>          |   |      |     |    |     |      |     |     | 4   | 4  |    |    | 3  |    |    | 4  |    |    | 4  |    |    | 4  |    |    | 0  |    |    |   |    |    |