PLAN STUDIÓW DLA I ROKU KIERUNKU INŻYNIERIA BIOMEDYCZNA - studia I stopnia (inżynierskie)
Specjalność: Informatyka i aparatura medyczna

| | | | | Godziny | | | | | I | | | | | | II | | | | | | III | | | | | | IV | | | | | | V | | | | | | VI | | | | | | VII | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Przedmioty wspólne | Kod przedmiotu | Typ | Suma | W | C | L | P | W | C | L | P | E | ECTS | W | C | L | P | E | ECTS | W | C | L | P | E | ECTS | W | C | L | P | E | ECTS | W | C | L | P | E | ECTS | W | C | L | P | E | ECTS | W | C | L | P | ECTS |
| W1 | Język angielski | IB-S1-PA-1/2/3/4-W1 | o | 120 | | 120 | | | | 30 | | | | 2 | | 30 | | | | 2 | | 30 | | | | 2 | | 30 | | | E | 2 | | | | | | | | | | | | | | | | |
| W2 | Wychowanie fizyczne | IB-S1-PA-1/2-W2 | w | 60 | | 60 | | | | 30 | | | | | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W3 | Prawo własności intelektualnej | IB-S1-PA-7-W3 | o | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | 2 |
| W4 | Ekonomika w ochronie zdrowia | IB-S1-PA-7-W4 | o | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | 2 |
| W5 | Bezpieczeństwo pracy i ergonomia | IB-S1-PA-7-W5 | o | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | 2 |
| W6 | Matematyka | IB-S1-PA-1/2-W6 | o | 120 | 60 | 60 | | | 30 | 30 | | | E | 5 | 30 | 30 | | | E | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W7 | Fizyka | IB-S1-PA-1-W7 | o | 60 | 30 | 30 | | | 30 | 30 | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W8 | Chemia | IB-S1-PA-2-W8 | o | 60 | 30 | | 30 | | | | | | | | 30 | | 30 | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W9 | Biochemia | IB-S1-PA-3-W9 | o | 15 | 15 | | | | | | | | | | | | | | | | 15 | | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| W10 | Biofizyka | IB-S1-PA-3-W10 | o | 60 | 30 | | 30 | | | | | | | | | | | | | | 30 | | 30 | | | 4 | | | | | | | | | | | | | | | | | | | | |
| W11 | Technologia informacyjna | IB-S1-PA-1-W11 | o | 60 | 30 | | 30 | | 30 | | 30 | | E | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W12 | Rejestracja sygnałów biomedycznych | IB-S1-PA-3-W12 | o | 30 | 15 | | 15 | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | | | | | | | | | | | | | | | | |
| W13 | Wprowadzenie do obliczeń inżynierskich | IB-S1-PA-2-W13 | o | 15 | | | 15 | | | | | | | | | | 15 | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W14 | Statystyka medyczna | IB-S1-PA-3-W14 | o | 30 | 15 | | 15 | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | | | | | | | | | | | | | | | | |
| W15 | Metody numeryczne | IB-S1-PA-2-W15 | o | 60 | 30 | | 30 | | | | | | | | 30 | | 30 | | E | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W16 | Języki programowania | IB-S1-PA-1/2-W16 | o | 90 | 45 | | 45 | | 30 | | 30 | | | 4 | 15 | | 15 | | E | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W17 | Grafika komputerowa | IB-S1-PA-3-W17 | o | 30 | 15 | | 15 | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | | | | | | | | | | | | | | | | |
| W18 | Techniki obrazowania medycznego | IB-S1-PA-3-W18 | o | 60 | 30 | | 15 | 15 | | | | | | | | | | | | | 30 | | 15 | 15 | E | 4 | | | | | | | | | | | | | | | | | | | | |
| W19 | Materiałoznawstwo | IB-S1-PA-1-W19 | o | 60 | 30 | | 30 | | 30 | | 30 | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W20 | Podstawy technik wytwarzania | IB-S1-PA-1-W20 | o | 30 | 15 | | | 15 | 15 | | | 15 | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W21 | Zapis konstrukcji | IB-S1-PA-3-W21 | o | 30 | 15 | | | 15 | | | | | | | | | | | | | 15 | | | 15 | | 2 | | | | | | | | | | | | | | | | | | | | |
| W22 | Biomateriały | IB-S1-PA-5-W22 | o | 60 | 30 | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | 30 | | | 4 | | | | | | | | |
| W23 | Implanty | IB-S1-PA-6-W23 | o | 30 | 15 | | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | 15 | E | 3 | | | | | |
| W24 | Mechanika | IB-S1-PA-2-W24 | o | 60 | 30 | 30 | | | | | | | | | 30 | 30 | | | E | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W25 | Wytrzymałość materiałów | IB-S1-PA-3-W25 | o | 30 | 15 | 15 | | | | | | | | | | | | | | | 15 | 15 | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| W26 | Podstawy konstrukcji maszyn | IB-S1-PA-4-W26 | o | 60 | 30 | | | 30 | | | | | | | | | | | | | | | | | | | 30 | | | 30 | | 5 | | | | | | | | | | | | | | |
| W27 | Biomechanika inżynierska | IB-S1-PA-4-W27 | o | 45 | 30 | | 15 | | | | | | | | | | | | | | | | | | | | 30 | | 15 | | E | 3 | | | | | | | | | | | | | | |
| W28 | Wspomagane komputerowo projektowanie inżynierskie | IB-S1-PA-5-W28 | o | 45 | 15 | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | 30 | | 3 | | | | | | | | |
| W29 | Elektronika | IB-S1-PA-2-W29 | o | 45 | 30 | | 15 | | | | | | | | 30 | | 15 | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W30 | Teoria obwodów | IB-S1-PA-1-W30 | o | 30 | 15 | | 15 | | 15 | | 15 | | E | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W31 | Metrologia | IB-S1-PA-3-W31 | o | 30 | 15 | | 15 | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | | | | | | | | | | | | | | | | |
| W32 | Sensory i pomiary wielkości nieelektrycznych | IB-S1-PA-5-W32 | o | 30 | 15 | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | | | | |
| W33 | Automatyka i robotyka | IB-S1-PA-4-W33 | o | 45 | 15 | 15 | 15 | | | | | | | | | | | | | | | | | | | | 15 | 15 | 15 | | | 3 | | | | | | | | | | | | | | |
| W34 | Cyfrowe przetwarzanie sygnałów biomedycznych | IB-S1-PA-3-W34 | o | 60 | 30 | | 30 | | | | | | | | | | | | | | 30 | | 30 | | E | 5 | | | | | | | | | | | | | | | | | | | | |
| W35 | Sztuczne narządy | IB-S1-PA-6-W35 | o | 30 | 15 | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | |
| W36 | Anatomia i fizjologia | IB-S1-PA-2-W36 | o | 15 | 15 | | | | | | | | | | 15 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| W37 | Propedeutyka nauk medycznych | IB-S1-PA-3-W37 | o | 15 | 15 | | | | | | | | | | | | | | | | 15 | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| W38 | Prawne i etyczne aspekty inżynierii biomedycznej | IB-S1-PA-6-W38 | o | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | 2 | | | | | |
| | Przedmioty specjalnościowe | | | 1680 | 795 | 330 | 465 | 90 | 180 | 120 | 105 | 15 | 3 | 30 | 180 | 120 | 105 | | 4 | 30 | 210 | 45 | 135 | 30 | 2 | 30 | 75 | 45 | 30 | 30 | 2 | 13 | 60 | | 45 | 30 | | 9 | 45 | | 15 | 15 | 1 | 7 | 45 | | | | 6 |
| S1 | Obliczenia inżynierskie | IB-S1-PA-4/5-S1-IM | w | 90 | 30 | | 30 | 30 | | | | | | | | | | | | | | | | | | | 30 | | 30 | | | 4 | | | | 30 | | 2 | | | | | | | | |
| S2 | Biocybernetyka | IB-S1-PA-4/5-S2-IM | w | 90 | 30 | | 30 | 30 | | | | | | | | | | | | | | | | | | | 30 | | 30 | | E | 4 | | | | 30 | | 2 | | | | | | | | |
| S3 | Bazy danych medycznych | IB-S1-PA-5-S3-IM | w | 60 | 30 | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | 30 | | | 4 | | | | | | | | |
| S4 | Przetwarzanie obrazów medycznych | IB-S1-PA-5/6-S4-IM | w | 90 | 30 | | 30 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | 30 | | E | 4 | | | | 30 | | 2 | | |
| S5 | Elektroniczna aparatura medyczna | IB-S1-PA-4-S5-IM | w | 45 | 30 | | | 15 | | | | | | | | | | | | | | | | | | | 30 | | | 15 | E | 3 | | | | | | | | | | | | | |
| S6 | Systemy mikroprocesorowe | IB-S1-PA-5-S6-IM | w | 60 | 30 | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | 30 | | E | 4 | | | | | | | | |
| S7 | Niezawodność systemów biomedycznych | IB-S1-PA-4-S7-IM | w | 30 | 15 | | 15 | | | | | | | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | | | | | | | | | | |
| S8 | Programowanie aplikacji z interfejsem graficznym | IB-S1-PA-5/6-S8-IM | w | 90 | 30 | | 30 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | 30 | | | 4 | | | | 30 | | 2 | | |
| S9 | Telemedycyna i technologie sieciowe | IB-S1-PA-4/5-S9-IM | w | 75 | 30 | | 30 | 15 | | | | | | | | | | | | | | | | | | | 30 | | 30 | | | 4 | | | | 15 | | 1 | | | | | | | | |
| S10 | Profesjonalny skład tekstów naukowych | IB-S1-PA-6-S10-IM | w | 30 | 15 | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 15 | | | 3 | | | | | |
| S11 | Bionika | IB-S1-PA-6-S11-IM | w | 45 | 15 | | 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 15 | 15 | E | 4 | | | | | |
| S12 | Medyczne procedury diagnostyczne | IB-S1-PA-7-S12-IM | w | 15 | | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 2 |
| S13 | Język angielski w Inżynierii Biomedycznej | IB-S1-PA-6-S13-IM | w | 30 | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | | | | 2 | | | | | |
| S14 | Podstawy analiza algorytmów | IB-S1-PA-6-S14-IM | w | 30 | 15 | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | 15 | | | 2 | | | | | |
| S15 | Oracle. Administracja i programowanie | IB-S1-PA-6-S14-IM | w | 15 | | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | | | | | 2 | | | | | |
| | Przedmioty inne | | | 795 | 300 | 30 | 300 | 165 | | | | | | | | | | | | | | | | | | | 135 | | 105 | 15 | 2 | 17 | 120 | | 120 | 75 | 2 | 21 | 30 | 30 | 30 | 75 | 1 | 17 | | | 15 | | 2 |
| 1 | Przedmioty obieralne | IB-S1-6/7-Ox-IM | w | 90 | 60 | | 30 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | | 30 | 15 | 5 | 30 | | 30 | | 5 |
| 2 | Praktyka studencka | IB-S1-PA-6-PS | w | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| 3 | Projekt inżynierski | IB-S1-PA-7-PI-M | w | 45 | | | | 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 45 | 17 |
| | | | | 135 | 60 | | 30 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | | | 30 | | 6 | 30 | | 30 | 45 | 22 |
| | Łącznie | | | 2610 | 1155 | 360 | 795 | 330 | 180 | 120 | 105 | 15 | 3 | 30 | 180 | 120 | 105 | | 4 | 30 | 210 | 45 | 135 | 30 | 2 | 30 | 210 | 45 | 135 | 45 | 4 | 30 | 180 | | 165 | 105 | 2 | 30 | 105 | 30 | 45 | 120 | 2 | 30 | 75 | | 45 | 45 | 30 |
| | | | | Godziny tygodniowo | | | | | | | | | | 28 | | | | | | 27 | | | | | | 28 | | | | | | 29 | | | | | | 30 | | | | | | 20 | | | | | 11 |

**Typ o – przedmiot ogólny,** **Typ w – przedmiot wybieralny,** **- wykłady prowadzone w języku angielskim**

Plan studiów zatwierdzony na Radzie Wydziału w dn
Uchwała nr

obowiązuje studentów od naboru 2017/2018