**WYDZIAŁ:** Fizyki Technicznej i Matematyki Stosowanej
**KIERUNEK:** Matematyka
**poziom kształcenia:** studia pierwszego stopnia
**profil :** ogólnoakademicki
**forma studiów:** stacjonarne

| Lp. | O/F | symbol | nazwa zajęć | grupa zajęć | SEMESTR I | | | | | | | SEMESTR II | | | | | | | SEMESTR III | | | | | | | SEMESTR IV | | | | | | | | SEMESTR V | | | | | | | | SEMESTR VI | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | forma zaliczenia | liczba godzin | | | | | liczba punktów ECTS | forma zaliczenia | liczba godzin | | | | | liczba punktów ECTS | forma zaliczenia | liczba godzin | | | | | liczba punktów ECTS | forma zaliczenia | liczba godzin | | | | | | liczba punktów ECTS | forma zaliczenia | liczba godzin | | | | | | liczba punktów ECTS | forma zaliczenia | liczba godzin | | | | | | liczba punktów ECTS |
| | | | | | | w | ć | l | p | razem | | | w | ć | l | p | razem | | | w | ć | l | p | razem | | | w | ć | l | p | s | razem | | | w | ć | l | p | s | razem | | | w | ć | l | p | s | razem | |
| **Blok przedmiotów wspólnych** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. | O | MAT1001/1 | Analiza matematyczna | B | E | 60 | 60 | | | 120 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. | O | MAT1001/2 | Analiza matematyczna | B | | | | | | | | E | 60 | 60 | | | 120 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. | O | MAT1001/3 | Analiza matematyczna | B | | | | | | | | | | | | | | | E | 60 | 60 | | | 120 | 10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | O | MAT1002/1 | Algebra liniowa | B | Z | 30 | 30 | | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. | O | MAT1002/2 | Algebra liniowa | B | | | | | | | | E | 30 | 30 | | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. | O | MAT1003 | Wstęp do logiki i teorii mnogości | B | E | 30 | 30 | | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. | O | MAT1004 | Geometria analityczna | B | Z | 30 | 30 | | | 60 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. | O | MAT1005 | Technologie informacyjne | B | Z | 15 | | 30 | | 45 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. | O | MAT1H01 | Filozofia | D | Z | 30 | | | | 30 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. | O | MAT1ZEP | Podstawy zarządzania, ekonomii i prawa | E | Z | 30 | | | | 30 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. | O | MAT1006 | Matematyka dyskretna | B | | | | | | | | E | 30 | 30 | | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. | O | MAT1007 | Programowanie | B | | | | | | | | Z | 30 | | 30 | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13. | O | MAT1JO | Język obcy | A | | | | | | | | Z | | 30 | | | 30 | 2 | Z | | 30 | | | 30 | 2 | Z | | 30 | | | | 30 | 2 | | | | | | | | | Z | | 30 | | | | 30 | 2 |
| 14. | O | MAT1WF | Wychowanie fizyczne | A | | | | | | | | Z | | 30 | | | 30 | 1 | Z | | 30 | | | 30 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 15. | O | MAT1H02 | Historia filozofii z elementami historii matematyki | D | | | | | | | | Z | 30 | | | | 30 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16. | O | MAT1008 | Równania różniczkowe I | B | | | | | | | | | | | | | | | E | 30 | 30 | | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 17. | O | MAT1009 | Pakiety matematyczne | B | | | | | | | | | | | | | | | Z | 15 | | 30 | | 45 | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 18. | O | MAT1010 | Topologia | B | | | | | | | | | | | | | | | E | 30 | 30 | | | 60 | 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 19. | O | MAT1011 | Wstęp do teorii miary | B | | | | | | | | | | | | | | | Z | 15 | 30 | | | 45 | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 20. | O | MAT1012 | Algebra I | B | | | | | | | | | | | | | | | | | | | | | | E | 30 | 30 | | | | 60 | 5 | | | | | | | | | | | | | | | |
| 21. | O | MAT1013/1 | Rachunek prawdopodobieństwa | B | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 30 | | | | 60 | 4 | | | | | | | | | | | | | | | |
| 22. | O | MAT1013/2 | Rachunek prawdopodobieństwa | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 30 | | | | 60 | 5 | | | | | | | | |
| 23. | O | MAT1014 | Funkcje zespolone | B | | | | | | | | | | | | | | | | | | | | | | E | 30 | 30 | | | | 60 | 5 | | | | | | | | | | | | | | | |
| 24. | O | MAT1015 | Równania różniczkowe cząstkowe | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | 30 | | | | 60 | 5 | | | | | | | | |
| 25. | O | MAT1016 | Analiza funkcjonalna I | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 30 | | | | 60 | 5 |
| | | **RAZEM** | **1605** | | **ŁĄCZNIE** | **405** | | | | | **30** | **ŁĄCZNIE** | **390** | | | | | **30** | **ŁĄCZNIE** | **390** | | | | | **30** | **ŁĄCZNIE** | **210** | | | | | | **16** | **ŁĄCZNIE** | **120** | | | | | | **10** | **ŁĄCZNIE** | **90** | | | | | | **7** |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Przedmioty specjalnościowe BIOMATEMATYKA** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. | F | MAT1017 | Biologia molekularna | C | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 15 | | 15 | 60 | 4 | | | | | | | | | | | | | | | | | |
| 2. | F | MAT1018 | Bazy danych | C | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 | | | | | | | | | | | | | | | | | |
| 3. | F | MAT1019 | Wstęp do modelowania stochastycznego | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | 60 | 4 | | | | | | | | |
| 4. | F | MAT1020 | Biomatematyka I | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 30 | | | | 60 | 5 | | | | | | | | |
| 5. | F | MAT1021 | Metody numeryczne | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 15 | 15 | | | 60 | 5 | | | | | | | | |
| 6. | F | MAT1022 | Statystyka I | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | | 15 | | | 30 | 2 | | | | | | | | |
| 7. | F | MAT1023 | Biofizyka 1/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 | | | | | | | | |
| 8. | F | MAT1024 | Fizyka 1/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | 15 | 30 | | | | | | | | | | | | |
| 9. | F | MAT1025 | Genetyka | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 15 | | 15 | 60 | 4 |
| 10. | F | MAT1026 | Statystyka medyczna I | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | 60 | 4 |
| 11. | F | MAT1027 | Metody matematyczne fizyki | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 30 | | | | 60 | 4 |
| 12. | O | MAT1PR | Praktyka (4 tygodnie) | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | | | | | | | | | | | | | | |
| 22. | O | MAT1SD | Seminarium dyplomowe | C/F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | | | | | 30 | 30 | 3 |
| 23. | O | MAT1PDL | Praca dyplomowa licencjacka | C/F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | | | | 60 | | 60 | 8 |
| | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | | | | | | | | **ŁĄCZNIE** | | | | **120** | | | **14** | **ŁĄCZNIE** | | | | **270** | | | **20** | **ŁĄCZNIE** | | | | **270** | | | **23** |
| | | **RAZEM** | **2265** | **180** | **RAZEM** | | | **405** | | | **30** | **RAZEM** | | | **390** | | | **30** | **RAZEM** | | | **390** | | | | **30** | **RAZEM** | | | **330** | | | **30** | **RAZEM** | | | | **390** | | | **30** | **RAZEM** | | | | **360** | | | **30** |
| **Przedmioty specjalnościowe MATEMATYKA FINANSOWA** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. | F | MAT1028 | Zarządzanie finansami | C | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | | | 45 | 2 | | | | | | | | | | | | | | | | | |
| 2. | F | MAT1029 | Programowanie w SAS | C | | | | | | | | | | | | | | | | | | | | | | | | Z | | | 30 | | | 30 | 2 | | | | | | | | | | | | | | | | | |
| 3. | F | MAT1018 | Bazy danych | C | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 | | | | | | | | | | | | | | | | | |
| 4. | F | MAT1030 | Analiza ryzyka i bezpieczeństwa w technice | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 15 | | 15 | | 60 | 5 | | | | | | | | |
| 5. | F | MAT1031 | Elementy optymalizacji w matematyce finansowej 2/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | | | 15 | 45 | 4 | | | | | | | | |
| 6. | F | MAT1032 | Zarządzanie ryzykiem w warunkach niepewności 2/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | 15 | 15 | | | | | | | | | | | | |
| 7. | F | MAT1021 | Metody numeryczne | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 15 | 15 | | | 60 | 5 | | | | | | | | |
| 8. | F | MAT1022 | Statystyka I | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | | 15 | | | 30 | 2 | | | | | | | | |
| 9. | F | MAT1023 | Biofizyka 1/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 | | | | | | | | |
| 10. | F | MAT1024 | Fizyka 1/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | 15 | 30 | | | | | | | | | | | | |
| 11. | F | MAT1033 | Statystyka z wykorzystaniem SAS | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 |
| 12. | F | MAT1034 | Matematyczne modele ekonomii 3/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | 60 | 4 |
| 13. | F | MAT1035 | Rynki surowców i energii 3/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | | 15 | 15 | | |
| 14. | F | MAT1027 | Metody matematyczne fizyki | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 30 | | | | 60 | 4 |
| 15. | O | MAT1PR | Praktyka (4 tygodnie) | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | | | | | | | | | | | | | | |
| 22. | O | MAT1SD | Seminarium dyplomowe | C/F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | | | | | 30 | 30 | 3 |
| 23. | O | MAT1PDL | Praca dyplomowa licencjacka | C/F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | | | | 60 | | 60 | 8 |
| | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | | | | | | | | **ŁĄCZNIE** | | | | **135** | | | **14** | **ŁĄCZNIE** | | | | **255** | | | **20** | **ŁĄCZNIE** | | | | **270** | | | **23** |
| | | **RAZEM** | **2265** | **180** | **RAZEM** | | | **405** | | | **30** | **RAZEM** | | | **390** | | | **30** | **RAZEM** | | | **390** | | | | **30** | **RAZEM** | | | **345** | | | **30** | **RAZEM** | | | | **375** | | | **30** | **RAZEM** | | | | **360** | | | **30** |

**Przedmioty specjalnościowe MATEMATYKA STOSOWANA**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | F | MAT1036 | Teoria sterowania I 4/ | C | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | 60 | 4 | | | | | | | | | | | | | | | | |
| 2. | F | MAT1037 | Dyskretne układy dynamiczne 4/ | C | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | | | | | | | | | | | | | | | | | | |
| 3. | F | MAT1018 | Bazy danych | C | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 | | | | | | | | | | | | | | | | |
| 4. | F | MAT1038 | Matematyczne ujęcie zjawisk symetrycznych | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 30 | | | | 60 | 5 | | | | | | | | |
| 5. | F | MAT1039 | Identyfikacja układów technicznych | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | 60 | 4 | | | | | | | | |
| 6. | F | MAT1021 | Metody numeryczne | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | E | 30 | 15 | 15 | | | 60 | 5 | | | | | | | | |
| 7. | F | MAT1022 | Statystyka I | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | | 15 | | | 30 | 2 | | | | | | | | |
| 8. | F | MAT123 | Biofizyka 1/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | | 30 | | | 60 | 4 | | | | | | | | |
| 9. | F | MAT1024 | Fizyka 1/ | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 15 | 15 | 30 | | | | | | | | | | | | |
| 10. | F | MAT1040 | Bifurkacje w równaniach mechaniki sprężystej | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 30 | | | | 60 | 4 |
| 11. | F | MAT1041 | Techniczne układy dyskretne | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 15 | | 15 | | 60 | 4 |
| 12. | F | MAT1027 | Metody matematyczne fizyki | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | 30 | 30 | | | | 60 | 4 |
| 13. | O | MAT1PR | Praktyka (4 tygodnie) | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | | | | | | | | | | | | | |
| 22. | O | MAT1SD | Seminarium dyplomowe | C/F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | | | | | 30 | 30 | 3 |
| 23. | O | MAT1PDL | Praca dyplomowa licencjacka | C/F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Z | | | | 60 | | 60 | 8 |
| | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | | | | | | | **ŁĄCZNIE** | **120** | | | | | | **14** | **ŁĄCZNIE** | **270** | | | | | | **20** | **ŁĄCZNIE** | **270** | | | | | | |
| | | **RAZEM** | **2265** | **180** | **RAZEM** | **405** | | | | | **30** | **RAZEM** | **390** | | | | | **30** | **RAZEM** | **390** | | | | | **30** | **RAZEM** | **330** | | | | | | **30** | **RAZEM** | **390** | | | | | | **30** | **RAZEM** | **360** | | | | | | **30** |

| | |
|---|---|
| SUMA GODZIN | 2265 |
| SUMA ECTS | 180 |

objaśnienia:

**O** - przedmiot obowiązkowy do zaliczenia danego roku studiów

**F** - przedmiot fakultatywny (do wyboru)

**w** - wykład

**ć** - ćwiczenia

**l** - laboratorium

**p** - projekt

s – seminarium

1/ 2/ 3/ i 4/ - przedmiot do wyboru