Wojskowa Akademia Techniczna

# PLAN NIESTACJONARNYCH STUDIOW PIERWSZEGO STOPNIA - INZYNIERSKICH O PROFILU OGOLNOAKADEMICKIM

**WYDZIAŁ MECHANICZNY**

**KIERUNEK: MECHANIKA I BUDOWA MASZYN**

**Specjalność: TECHNIKI KOMPUTEROWE W INŻYNIERII MECHANICZNEJ**

**początek 2018 rok**

| | moduły | ogółem godzin/ pkt ECTS | | | ECTS zajęcia nauk. | ECTS udział NA | w tym godzin: | | | | | liczba godzin/rygor/pkt ECTS w semestrze: | | | | | | | | | | | | | | jednostka organizacyjna (instytut/katedra) odpowiedzialna za moduł |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | I | | II | | III | | IV | | V | | VI | | VII | | |
| | | godz. | w sem. | ECTS | | | wykł. | ćwicz. | lab. | projekt | semin. | godz. | ECTS | godz. | ECTS | godz. | ECTS | godz. | ECTS | godz. | ECTS | godz. | ECTS | godz. | ECTS | |
| | **A. moduły ogólne*** | **232** | **232** | **19,5** | | **8,5** | **86** | **136** | **10** | | | **36** | **4,0** | | | **40** | **3,0** | **30** | **2,0** | **58** | **4,0** | **48** | **4,0** | **20** | **2,5** | |
| 1 | PODSTAWY ZARZADZANIA | 14 | 14 | 2,0 | | 0,5 | 8 | 6 | | | | 14 + | 2 | | | | | | | | | | | | | WLO - IL |
| 2 | TECHNOLOGIA INFORMACYJNA | 18 | 18 | 2,0 | | 0,5 | 8 | | 10 | | | 18 + | 2 | | | | | | | | | | | | | WME - KMiIS |
| 3 | JĘZYK OBCY | 120 | 120 | 8,0 | | 4,5 | | 120 | | | | | | | | 30 + | 2 | 30 + | 2 | 30 + | 2 | 30 + | 2 | | | SJO |
| 4 | WYBRANE ZAGADNIENIA PRAWA | 10 | 10 | 1,0 | | 0,5 | 10 | | | | | | | | | 10 + | 1 | | | | | | | | | WCY |
| 5 | ETYKA ZAWODOWA | 10 | 10 | 1,0 | | 0,5 | 10 | | | | | | | | | | | | | 10 + | 1 | | | | | WCY |
| 6 | HISTORIA POLSKI - WYBRANE ASPEKTY 1 | 18 | 18 | 1,0 | | 0,5 | 16 | 2 | | | | | | | | | | | | 18 + | 1 | | | | | WCY |
| 7 | HISTORIA POLSKI - WYBRANE ASPEKTY 2 | 18 | 18 | 2,0 | | 0,5 | 16 | 2 | | | | | | | | | | | | | | 18 x | 2 | | | WCY |
| 8 | OCHRONA WŁASNOŚCI INTELEKTUALNYCH | 8 | 8 | 1,0 | | 0,5 | 6 | 2 | | | | | | | | | | | | | | | | 8 + | 1 | WCY |
| 9 | BHP | 4 | 4 | | | | 4 | | | | | 4 | | | | | | | | | | | | | | WAT |
| | **Wybieralne treści** | **12** | **12** | **1,5** | | **0,5** | **8** | **4** | | | | | | | | | | | | | | | | **12** | **1,5** | WCY |
| 10 | *PODSTAWY EKONOMII* | 12 | 12 | 1,5 | | 0,5 | 8 | 4 | | | | | | | | | | | | | | | | 12 + | 1,5 | WCY |
| 11 | *PSYCHOLOGIA* | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | *FILOZOFIA* | | | | | | | | | | | | | | | | | | | | | | | | | |
| | **B. moduły podstawowe*** | **486** | **486** | **60,5** | **29,0** | **18,0** | **234** | **188** | **64** | | | **148** | **21,5** | **140** | **17,0** | **108** | **12,5** | **90** | **9,5** | | | | | | | |
| 1 | BEZPIECZEŃSTWO PRACY I ERGONOMIA | 18 | 18 | 2,0 | 2,0 | 0,5 | 10 | 6 | 2 | | | 18 + | 2 | | | | | | | | | | | | | WME - IPMiT |
| 2 | BEZPIECZEŃSTWO RUCHU DROGOWEGO | 18 | 18 | 2,0 | 2,0 | 0,5 | 10 | 6 | 2 | | | 18 + | 2 | | | | | | | | | | | | | WME - IPMiT |
| 3 | GEOMETRIA WYKREŚLNA | 18 | 18 | 2,5 | 2,0 | 0,5 | 8 | 10 | | | | 18 + | 2,5 | | | | | | | | | | | | | WME - IBM |
| 4 | MASZYNOZNAWSTWO | 22 | 22 | 3,0 | 2,0 | 1,0 | 16 | 4 | 2 | | | 22 + | 3 | | | | | | | | | | | | | WME - IBM |
| 5 | MATEMATYKA 1 | 36 | 36 | 6,0 | | 1,5 | 16 | 20 | | | | 36 x | 6 | | | | | | | | | | | | | WCY |
| 6 | MATEMATYKA 2 | 36 | 36 | 6,0 | | 1,5 | 18 | 18 | | | | 36 x | 6 | | | | | | | | | | | | | WCY |
| 7 | FIZYKA 1 | 56 | 56 | 6,0 | | 2,0 | 26 | 20 | 10 | | | | | 56 x | 6 | | | | | | | | | | | WTC |
| 8 | MATEMATYKA 3 | 24 | 24 | 4,0 | | 1,0 | 12 | 8 | 4 | | | | | 24 x | 4 | | | | | | | | | | | WCY |
| 9 | MECHANIKA PŁYNÓW | 24 | 24 | 3,0 | 2,5 | 1,0 | 10 | 8 | 6 | | | | | 24 + | 3 | | | | | | | | | | | WME - IBM |
| 10 | MECHANIKA TECHNICZNA 1 | 22 | 22 | 2,0 | 2,0 | 1,0 | 12 | 10 | | | | | | 22 + | 2 | | | | | | | | | | | WME - KMiIS |
| 11 | FIZYKA 2 | 28 | 28 | 4,0 | | 1,0 | 12 | 8 | 8 | | | | | | | 28 x | 4 | | | | | | | | | WTC |
| 12 | MECHANIKA TECHNICZNA 2 | 26 | 26 | 3,0 | 3,0 | 1,0 | 12 | 14 | | | | | | | | 26 x | 3 | | | | | | | | | WME - KMiIS |
| 13 | STATYSTYKA INŻYNIERSKA | 18 | 18 | 2,0 | 2,0 | 0,5 | 8 | 8 | 2 | | | | | | | 18 + | 2 | | | | | | | | | WME - IPMiT |
| 14 | WYTRZYMAŁOŚĆ MATERIAŁÓW 1 | 22 | 22 | 2,5 | 2,5 | 1,0 | 12 | 10 | | | | | | | | 22 + | 2,5 | | | | | | | | | WME - KMiIS |
| 15 | CHEMIA | 18 | 18 | 2,0 | | 0,5 | 6 | 8 | 4 | | | | | | | | | 18 + | 2 | | | | | | | WTC |
| 17 | PODSTAWY DYNAMIKI MASZYN | 18 | 18 | 2,0 | 2,0 | 0,5 | 10 | 4 | 4 | | | | | | | | | 18 + | 2 | | | | | | | WME - IPMiT |
| 16 | WYTRZYMAŁOŚĆ MATERIAŁÓW 2 | 26 | 26 | 3,5 | 3,0 | 1,0 | 12 | 10 | 4 | | | | | | | | | 26 x | 3,5 | | | | | | | WME - KMiIS |
| | **Wybieralne treści** | **56** | **56** | **5,0** | **4,0** | **2,0** | **24** | **16** | **16** | | | | | **14** | **2,0** | **14** | **1,0** | **28** | **2,0** | | | | | | | |
| 18 | INŻYNIERIA RUCHU DROGOWEGO | 14 | 14 | 2,0 | 1,0 | 0,5 | 6 | 8 | | | | | | 14 + | 2 | | | | | | | | | | | WME - IPMiT |
| 19 | OGÓLNE PODSTAWY RUCHU MASZYN | | | | | | 6 | 8 | | | | | | | | | | | | | | | | | | |
| 20 | SYSTEMY CAE W PRAKTYCE INŻYNIERSKIEJ | 14 | 14 | 1,0 | 1,0 | 0,5 | 6 | | 8 | | | | | | | 14 + | 1 | | | | | | | | | WME - KMiIS |
| 21 | TECHNIKI EKSPERYMENTALNE W MECHANICE | | | | | | 6 | | 8 | | | | | | | | | | | | | | | | | |
| 22 | EXCEL DLA MECHANIKÓW | 14 | 14 | 1,0 | 1,0 | 0,5 | 6 | | 8 | | | | | | | | | 14 + | 1 | | | | | | | WME - KMiIS |
| 23 | MATLAB DLA MECHANIKÓW | | | | | | 6 | | 8 | | | | | | | | | | | | | | | | | |
| 24 | STEROWANIE W SYSTEMIE CAN-bus | 14 | 14 | 1,0 | 1,0 | 0,5 | 6 | 8 | | | | | | | | | | 14 + | 1 | | | | | | | WME - IBM |
| 25 | HYDROSTATYCZNE UKŁADY NAPĘDU I STEROWANIA MASZYN I POJAZDÓW | | | | | | 6 | 8 | | | | | | | | | | | | | | | | | | |
| | **C. moduły kierunkowe** | **530** | **530** | **68,0** | **57,0** | **21,0** | **270** | **140** | **118** | | **2** | **34** | **4,5** | **104** | **13,0** | **124** | **14,5** | **150** | **18,5** | **96** | **15,0** | **22** | **2,5** | | | |
| 1 | MATERIAŁY KONSTR. W BUDOWIE MASZYN 1 | 16 | 16 | 2,5 | 1,5 | 0,5 | 8 | | 8 | | | 16 + | 2,5 | | | | | | | | | | | | | WTC |
| 2 | ZARZADZANIE ŚRODOWISKIEM I EKOLOGIA | 18 | 18 | 2,0 | 2,0 | 0,5 | 12 | 4 | | | 2 | 18 + | 2 | | | | | | | | | | | | | WME - IPMiT |
| 3 | BUDOWA POJAZDÓW | 24 | 24 | 3,0 | 2,5 | 1,0 | 14 | 10 | | | | | | 24 + | 3 | | | | | | | | | | | WME - IPMiT |
| 4 | GRAFIKA INŻYNIERSKA | 34 | 34 | 4,0 | 4,0 | 1,5 | 6 | 24 | 4 | | | | | 34 + | 4 | | | | | | | | | | | WME - IBM |
| 5 | MATERIAŁY KONSTR. W BUDOWIE MASZYN 2 | 22 | 22 | 3,0 | 2,5 | 1,0 | 12 | | 10 | | | | | 22 x | 3 | | | | | | | | | | | WTC |
| 6 | METROLOGIA I SYSTEMY POMIAROWE | 24 | 24 | 3,0 | 2,5 | 1,0 | 10 | 6 | 8 | | | | | 24 + | 3 | | | | | | | | | | | WME - IPMiT |
| 7 | PODSTAWY EKSPLOATACJI | 26 | 26 | 2,5 | 2,5 | 1,0 | 18 | 8 | | | | | | | | 26 + | 2,5 | | | | | | | | | WME - IPMiT |
| 8 | TECHNIKI WYTWARZANIA 1 | 18 | 18 | 2,5 | 2,0 | 1,0 | 10 | 4 | 4 | | | | | | | 18 x | 2,5 | | | | | | | | | WTC |
| 9 | URZĄDZENIA HYDRAULICZNE I PNEUMATYCZNE | 22 | 22 | 2,5 | 2,5 | 1,0 | 12 | 6 | 4 | | | | | | | 22 + | 2,5 | | | | | | | | | WME - IBM |
| 10 | WYBRANE ZAGADNIENIA ELEKTROTECHNIKI I ELEKTRONIKI | 26 | 26 | 3,0 | 3,0 | 1,0 | 12 | 4 | 10 | | | | | | | 26 + | 3 | | | | | | | | | WME - IPMiT |
| 11 | PODSTAWY AUTOMATYKI I ROBOTYKI | 24 | 24 | 3,0 | 2,5 | 1,0 | 14 | 4 | 6 | | | | | | | | | 24 + | 3 | | | | | | | WME - IPMiT |
| 12 | PODSTAWY KONSTRUKCJI MASZYN 1 | 28 | 28 | 3,5 | 2,5 | 1,0 | 22 | | 6 | | | | | | | | | 28 x | 3,5 | | | | | | | WME - IBM |
| 13 | SYSTEMY I PROCESY LOGISTYCZNE | 24 | 24 | 3,0 | 2,5 | 1,0 | 16 | 8 | | | | | | | | | | 24 + | 3 | | | | | | | WLO - IL |
| 14 | TECHNIKI WYTWARZANIA 2 | 18 | 18 | 2,0 | 2,0 | 0,5 | 8 | 4 | 6 | | | | | | | | | 18 + | 2 | | | | | | | WTC |
| 15 | TERMODYNAMIKA TECHNICZNA | 24 | 24 | 3,0 | 2,5 | 1,0 | 14 | 6 | 4 | | | | | | | | | 24 x | 3 | | | | | | | WME - IPMiT |
| 16 | PŁYNY EKSPLOATACYJNE | 24 | 24 | 4,0 | 2,5 | 1,0 | 12 | 4 | 8 | | | | | | | | | | | 24 + | 4 | | | | | WME - IPMiT |
| 17 | PODSTAWY KONSTRUKCJI MASZYN 2 | 32 | 32 | 5,0 | 3,5 | 1,5 | 12 | 16 | 4 | | | | | | | | | | | 32 x | 5 | | | | | WME - IBM |
| 18 | TRIBOLOGIA I TRIBOTECHNIKA | 24 | 24 | 4,0 | 2,5 | 1,0 | 12 | | 12 | | | | | | | | | | | 24 + | 4 | | | | | WME - IPMiT |
| 19 | PODSTAWY KONSTRUKCJI MASZYN 3 | 22 | 22 | 2,5 | 2,5 | 1,0 | 12 | 8 | 2 | | | | | | | | | | | | | 22 + | 2,5 | | | WME - IBM |
| | **Wybieralne treści** | **80** | **80** | **10,0** | **9,0** | **2,5** | **34** | **24** | **22** | | | | | | | **32** | **4** | **32** | **4** | **16** | **2** | | | | | |
| 20 | CAD DLA MECHANIKÓW | 16 | 16 | 2,0 | 2,0 | 0,5 | 4 | | 12 | | | | | | | 16 + | 2 | | | | | | | | | WME - IBM |
| 21 | ZAPIS KONSTRUKCJI W PROGRAMIE CATIA | | | | | | 4 | | 12 | | | | | | | | | | | | | | | | | |
| 22 | ROZWÓJ UKŁADÓW NAPĘDOWYCH POJAZDÓW | 16 | 16 | 2,0 | 1,5 | 0,5 | 8 | 4 | 4 | | | | | | | 16 + | 2 | | | | | | | | | WME - IPMiT |
| 23 | POMIARY CYFROWE W TECHNICE | | | | | | 8 | 4 | 4 | | | | | | | | | | | | | | | | | |
| 24 | KSZTAŁTOWANIE KONSTRUKCJI W PROGRAMIE CATIA | 16 | 16 | 2,0 | 2,0 | 0,5 | 6 | 10 | | | | | | | | | | 16 + | 2 | | | | | | | WME - IBM |
| 25 | WYTRZYMAŁOŚĆ ZMĘCZENIOWA | | | | | | 6 | 10 | | | | | | | | | | | | | | | | | | |
| 26 | TECHNOLOGIA MONTAŻU MASZYN | 16 | 16 | 2,0 | 2,0 | 0,5 | 6 | 4 | 6 | | | | | | | | | 16 + | 2 | | | | | | | WME - IPMiT |
| 27 | METODY DIAGNOSTYKI MASZYN | | | | | | 6 | 4 | 6 | | | | | | | | | | | | | | | | | |
| 28 | ZARZĄDZANIE PRODUKCJĄ I EKSPLOATACJĄ MASZYN | 16 | 16 | 2,0 | 1,5 | 0,5 | 10 | 6 | | | | | | | | | | | | 16 + | 2 | | | | | WME - IPMiT |
| 29 | ZARZĄDZANIE JAKOŚCIĄ I STANDARYZACJA W BUDOWIE MASZYN | | | | | | 10 | 6 | | | | | | | | | | | | | | | | | | |
| | **D. moduły specjalistyczne / wybieralne** | **302** | **302** | **36,0** | **30,0** | **14,0** | **98** | **32** | **156** | **16** | | | | | | | | | | **94** | **11,0** | **178** | **19,5** | **30** | **5,5** | |
| 1 | KOMPUTEROWA SYMULACJA ZAGADNIEŃ MECHANIKI 1 | 34 | 34 | 4,0 | 4,0 | 1,5 | 6 | 6 | 22 | | | | | | | | | | | 34 + | 4 | | | | | WME - KMiIS |
| 2 | KOMPUTEROWE WSPOMAGANIE PROJEKTOWANIA | 30 | 30 | 3,5 | 3,0 | 1,5 | 6 | | 16 | 8 | | | | | | | | | | 30 + | 3,5 | | | | | WME - KMiIS |
| 3 | PODSTAWY METODY ELEMENTÓW SKOŃCZONYCH | 12 | 12 | 1,5 | 1,0 | 0,5 | 12 | | | | | | | | | | | | | 12 x | 1,5 | | | | | WME - KMiIS |
| 4 | PODSTAWY TEORII SPRĘŻYSTOŚCI | 18 | 18 | 2,0 | 1,5 | 1,0 | 18 | | | | | | | | | | | | | 18 + | 2 | | | | | WME - KMiIS |
| 5 | JĘZYK ANGIELSKI W SYSTEMACH CAE | 8 | 8 | 1,0 | 1,0 | 0,5 | | 8 | | | | | | | | | | | | | | 8 + | 1 | | | WME - KMiIS |
| 6 | KOMPUTEROWA SYMULACJA ZAGADNIEŃ MECHANIKI 2 | 50 | 50 | 5,0 | 4,0 | 1,5 | 16 | | 34 | | | | | | | | | | | | | 50 x | 5 | | | WME - KMiIS |
| 7 | KOMPUTEROWE WSPOMAGANIE OBLICZEŃ INŻYNIERSKICH | 38 | 38 | 4,5 | 3,5 | 1,5 | 6 | | 24 | 8 | | | | | | | | | | | | 38 x | 4,5 | | | WME - KMiIS |
| 8 | METODY NUMERYCZNE W OBLICZENIACH INŻYNIERSKICH | 28 | 28 | 3,0 | 3,0 | 1,5 | 6 | 10 | 12 | | | | | | | | | | | | | 28 + | 3 | | | WME - KMiIS |
| 9 | PODSTAWY WALIDACJI MODELI NUMERYCZNYCH | 18 | 18 | 2,0 | 2,0 | 1,0 | 6 | | 12 | | | | | | | | | | | | | 18 + | 2 | | | WME - KMiIS |
| 10 | WSPOMAGANIE EKSPERYMENTALNE MODELOWANIA NUMERYCZNEGO | 18 | 18 | 2,0 | 2,0 | 1,0 | 8 | | 10 | | | | | | | | | | | | | 18 + | 2 | | | WME - KMiIS |
| 11 | ZASTOSOWANIE SYSTEMÓW CAD/CAM W INŻYNIERII MECHANICZNEJ | 18 | 18 | 2,0 | 2,0 | 1,0 | 6 | 8 | 4 | | | | | | | | | | | | | 18 + | 2 | | | WME - KMiIS |
| 12 | KOMPUTEROWA SYMULACJA ZAGADNIEŃ MECHANIKI 3 | 30 | 30 | 5,5 | 3,0 | 1,5 | 8 | | 22 | | | | | | | | | | | | | | | 30 + | 5,5 | WME - KMiIS |
| | **E. Moduły związane z pracą dyplomową** | **254** | **254** | **22,0** | **17,5** | **11,0** | | | | | **254** | | | | | | | | | | | | | **254** | **22** | |
| 1 | SEMINARIUM DYPLOMOWE | 14 | 14 | 2,0 | 1,5 | 1,0 | | | | | 14 | | | | | | | | | | | | | 14 + | 2 | WME - KMiIS |
| 2 | PRACA DYPLOMOWA | 240 | 240 | 20,0 | 16,0 | 10,0 | | | | | 240 | | | | | | | | | | | | | 240 | 20 | WME |
| | **F. praktyki zawodowe** | **liczba tygodni** | | **4,0** | **4,0** | **0,5** | **termin realizacji** | | | | | | | | | | | | | | | **4 tyg.** | **4** | | | |
| | PRAKTYKA ZAWODOWA | 4 | | 4,0 | 4,0 | 0,5 | **po VI sem.** | | | | | | | | | | | | | | | 4 tyg. + | 4 | | | WME |
| | OGÓŁEM GODZIN * / pkt. ECTS | 1564 | 1564 | 210,0 | 137,5 | 73,0 | 688 | 496 | 348 | 16 | 16 | 218 | 30,0 | 244 | 30,0 | 272 | 30,0 | 270 | 30,0 | 248 | 30,0 | 248 | 30,0 | 64 | 30,0 | |
| | **dopuszczalny deficyt pkt. ECTS** | | | | | | | | | | | 16 | | 16 | | 16 | | 16 | | 16 | | 16 | | 16 | | |
| | Rodzaje i liczba rygorów w semestrze: | | | | | | | | | | liczba egzaminów x | 2 | | 3 | | 3 | | 3 | | 2 | | 3 | | | | |
| | | | | | | | | | | | liczba zaliczeń + | 6 | | 6 | | 10 | | 10 | | 9 | | 7 | | 4 | | |
| | | | | | | | | | | | liczba projektów przejściowych | | | | | | | | | | | | | | | |

* bez godzin przeznaczonych na kursy wyrównawcze i pracę dyplomową

Semestr V - VII - kształcenie po podziale na specjalności

Warunkiem dopuszczenia do egzaminu dyplomowego jest udokumentowanie umiejętności z języka obcego na poziomie B2

Plan studiów uchwalony przez Radę Wydziału Mechanicznego w dniu **16.05.2018 r.**

PRZEWODNICZĄCY RADY
WYDZIAŁU MECHANICZNEGO

dr hab. inż. Jerzy MAŁACHOWSKI
profesor WAT