



Uniwersytet
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**Wydział Fizyki
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UCHWAŁA Nr 81/2013

Rady Wydziału Fizyki i Astronomii
Uniwersytetu Wrocławskiego
podjęta w dniu
11 czerwca 2013 r.

Rada Wydziału podjęła uchwałę o przyjęciu planu i programu studiów I stopnia na kierunku fizyka.

| Nazwa przedmiotu | Egzamin sem, | Ra- zem | Wykł. | Konw. | Sem. | Lab. | inne | I rok - 2013/2014 | | | | II rok - 2014/2015 | | | | III rok - 2015/2016 | | | | | | | | | | | | | | | |
|-----------------------------------|--------------|-------------|------------|------------|------|------------|------|-------------------|-----------|----------|-----------|--------------------|-----------|----------|-----------|---------------------|-----------|----------|-----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|-----------|
| | | | | | | | | 1 sem | | | | 2 sem | | | | 3 sem | | | | 4 sem | | | | 5 sem | | | 6 sem | | | | |
| | | | | | | | | w | ów. | lab | ECTS | w | ów. | lab | ECTS | w | ów. | lab | ECTS | w | ów. | lab | ECTS | w | ów. | lab | ECTS | w | ów. | lab | ECTS |
| Fizyka - fizyka komputerowa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wstęp do algebry | zal | 60 | 30 | 15 | | 15 | | 2 | 1 | 1 | 6 | | | | | | | | | | | | | | | | | | | | |
| Matematyka 1 - RRC | egz 1 | 135 | 60 | 60 | | 15 | | 4 | 4 | 1 | 10 | | | | | | | | | | | | | | | | | | | | |
| Matematyka 2,3 | egz 2,3 | 255 | 105 | 105 | | 45 | | | | | | 4 | 4 | 2 | 10 | 3 | 3 | 1 | 8 | | | | | | | | | | | | |
| Elementy rach.p-stwa | egz 2 | 60 | 30 | 30 | | 0 | | | | | | 2 | 2 | | 4 | | | | | | | | | | | | | | | | |
| Podstawy fizyki 1,2,3,4 | egz 1,2,3,4 | 450 | 225 | 225 | | 0 | | 4 | 5 | | 10 | 4 | 4 | | 8 | 4 | 4 | | 8 | 3 | 2 | | 6 | | | | | | | | |
| I pracownia fizyczna 1 i 2 | zal | 90 | 0 | 0 | | 90 | | | | | | | | 3 | 5 | | | 3 | 5 | | | | | | | | | | | | |
| Elementy astronomii i astrofizyki | egz 6 | 45 | 45 | 0 | | 0 | | | | | | | | | | | | | | | | 3 | | 3 | | | | | | | |
| Programy użytkowe | zal | 45 | 15 | 0 | | 30 | | 1 | | 2 | 4 | | | | | | | | | | | | | | | | | | | | |
| Praktyczny wstęp do program. | zal | 60 | 15 | 0 | | 45 | | | 1 | | 3 | 3 | | | | | | | | | | | | | | | | | | | |
| Obli. numer. i symbol. w fizyce | zal | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | | 2 | | 2 | 4 | | | | | | | | |
| Elementy mech.teor.i STW | egz 3 | 60 | 30 | 30 | | 0 | | | | | | | 2 | 2 | | 5 | | | | | | | | | | | | | | | |
| Fizyka kwantowa | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | | | | |
| Elementy fiz.statystycznej | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | | | | |
| Metody numeryczne I | egz 5 | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | 2 | | 2 | 5 | | | | | | | | | |
| Algorytmy i struktury danych | egz 4 | 60 | 30 | 0 | | 30 | | | | | | | | | | | 2 | | 2 | 5 | | | | | | | | | | | |
| Modelowanie komputerowe | zal | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | | | | 2 | | 2 | 5 | | | | | | |
| Programowanie równoległe | egz 5 | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | 2 | | 2 | 5 | | | | | | | | | |
| Programowanie obiektowe 1 | egz 4 | 60 | 30 | 0 | | 30 | | | | | | | | | | | 2 | | 2 | 5 | | | | | | | | | | | |
| Programowanie obiektowe 2 | egz 5 | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | 2 | | 2 | 5 | | | | | | | | | |
| Sieci komputerowe | zal | 45 | 0 | 0 | | 45 | | | | | | | | | | | | | | | | 3 | 3 | | | | | | | | |
| Języki programowania i GIU | zal | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | | | | 2 | | 2 | 5 | | | | | | |
| Bazy danych | zal | 45 | 0 | 0 | | 45 | | | | | | | | | | | | | | | | | 3 | 3 | | | | | | | |
| Lektorat | egz 5 | 180 | 0 | 180 | | 0 | | | | | | | | | | 4 | 4 | | 4 | 4 | | 4 | | | | | | | | | |
| BHP i ochr.wła.intelektualnej | zal | 15 | 15 | 0 | | 0 | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | |
| Podstawy przedsiębiorczości | zal | 30 | 30 | 0 | | 0 | | | | | | | | | | | | | | | | 2 | | 2 | | | | | | | |
| Praktyka | zal | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | | 3 | | | | | | | | |
| WF | zal | 30 | 30 | 0 | | 0 | | | | | | | | | | | | | | 2 | | | 1 | | | | | | | | |
| Seminarium | zal | 30 | 0 | 30 | | 0 | | | | | | | | | | | | | | | | | 2 | | 2 | | | | | | |
| Praca dypl. + egz. Dyplom. | egz 6 | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | | | 10 | | | | | | | |
| Razem | | 2235 | 930 | 735 | | 570 | | 11 | 10 | 4 | 30 | 11 | 10 | 8 | 30 | 9 | 13 | 4 | 30 | 12 | 10 | 4 | 31 | 10 | 4 | 11 | 30 | 9 | 2 | 7 | 30 |
| Razem wykł. Ćwicz. | | | | | | | | 25 | | | | 29 | | | | 26 | | | | 26 | | | | 25 | | | | 18 | | | |

| Nazwa przedmiotu | Egzamin sem, | Ra- zem | Wykl. | Konw. | Sem. | Lab. | inne | I rok - 2013/2014 | | | | II rok - 2014/2015 | | | | III rok - 2015/2016 | | | | | | | | | | | | | | | |
|-----------------------------------|--------------|------------|-------|-------|------|------|------|-------------------|-----|-------|------|--------------------|-----|-------|------|---------------------|-----|-------|------|----|-----|-----|------|----|----|---|----|----|---|---|----|
| | | | | | | | | 1 sem | | 2 sem | | 3 sem | | 4 sem | | 5 sem | | 6 sem | | | | | | | | | | | | | |
| | | | | | | | | w | ów. | lab | ECTS | w | ów. | lab | ECTS | w | ów. | lab | ECTS | w | ów. | lab | ECTS | | | | | | | | |
| Fizyka - fizyka teoretyczna | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Algebra 1,2 | egz 1,2 | 135 | 60 | 60 | | 15 | | 2 | 2 | | 6 | 2 | 2 | 1 | 4 | | | | | | | | | | | | | | | | |
| Analiza matematyczna 1, 2, 3 | egz 1,2,3 | 330 | 150 | 135 | | 45 | | 3 | 3 | 1 | 10 | 4 | 3 | 1 | 10 | 3 | 3 | 1 | 8 | | | | | | | | | | | | |
| Rachunek prawdopodobieństwa | egz 2 | 60 | 30 | 30 | | 0 | | | | | | 2 | 2 | | 4 | | | | | | | | | | | | | | | | |
| Mechanika | egz 1 | 135 | 60 | 75 | | 0 | | 4 | 5 | | 10 | | | | | | | | | | | | | | | | | | | | |
| Termodynamika | egz 2 | 60 | 30 | 30 | | 0 | | | | | | 2 | 2 | | 4 | | | | | | | | | | | | | | | | |
| Elektryczność i magnetyzm | egz 3 | 120 | 60 | 60 | | 0 | | | | | | | | | | 4 | 4 | | 8 | | | | | | | | | | | | |
| Fale | egz 4 | 75 | 45 | 30 | | 0 | | | | | | | | | | | | | | 3 | 2 | | 5 | | | | | | | | |
| I pracownia fizyczna 1 i 2 | zal | 90 | 0 | 0 | | 90 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fizyka atomu, jądra i cząstek. | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | |
| Elementy astronomii i astrofizyki | egz 6 | 45 | 45 | 0 | | 0 | | | | | | | | | | | | | | | | | | 3 | | 3 | | | | | |
| Programy użytkowe | zal | 45 | 15 | 0 | | 30 | | 1 | | 2 | 4 | | | | | | | | | | | | | | | | | | | | |
| Praktyczny wstęp do program. | zal | 60 | 15 | 0 | | 45 | | | | | | 1 | | 3 | 3 | | | | | | | | | | | | | | | | |
| Obli. numer. i symbol. w fizyce | zal | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | | | | | 2 | | 2 | 4 | | | | | |
| Mechanika teoretyczna | egz 3 | 60 | 30 | 30 | | 0 | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | | | | | |
| Mechanika kwantowa 1 | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 6 | | | | | | | | |
| Mechanika kwantowa 2 | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | 2 | 2 | | 6 | | | | | |
| Fizyka statystyczna | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 6 | | | | | | | | |
| Metody mat.fiz.teoret. | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | |
| Elektrodynamika klasyczna | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | |
| Teoria materii skonden. | egz 6 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | | | 2 | 2 | 5 | | | | |
| Wstęp do geometrii różn. | * | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wstęp do teorii wielu ciał lub | egz 6 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | | | 2 | 2 | 5 | | | | |
| Optyka kwantowa | * | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fizyka fazy skondensowanej 1 | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | |
| Dodatkowy do wyboru | egz 6 | 30 | 30 | 0 | | 0 | | | | | | | | | | | | | | | | | | | 2 | | 3 | | | | |
| Lektorat | egz 5 | 180 | 0 | 180 | | 0 | | | | | | | | | | | 4 | 4 | | 4 | 4 | | 4 | 4 | | 4 | 4 | | | | |
| Podstawy przedsiębiorczości | zal | 30 | 30 | 0 | | 0 | | | | | | | | | | | | | | | | | | | 2 | | 2 | | | | |
| BHP i ochr.wła.intelektualnej | zal | 15 | 15 | 0 | | 0 | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | |
| Praktyka | zal | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | | 3 | | | | | | | | |
| WF | zal | 30 | 0 | 30 | | 0 | | | | | | | | | | | | | | | | | | 2 | | 1 | | | | | |
| Seminarium | zal | 30 | 0 | 30 | | 0 | | | | | | | | | | | | | | | | | | | 2 | | 2 | | | | |
| Praca dyplomowa +egz. Dypl | egz 6 | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | | | | | | 10 | | | | |
| Razem | | 2130 | 915 | 960 | | 255 | | 10 | 10 | 3 | 30 | 11 | 9 | 8 | 30 | 9 | 13 | 4 | 30 | 10 | 12 | 0 | 30 | 10 | 14 | 2 | 30 | 11 | 6 | 0 | 30 |
| Razem wykł. Ćwicz. | | | | | | | | 23 | | | | 28 | | | | 26 | | | | 22 | | | | 26 | | | 17 | | | | |

* do wyboru

| Nazwa przedmiotu | Egzamin sem. | Ra- zem | Wykt. | Konw. | Sem. | Lab. | inne | I rok - 2013/2014 | | | | | | | | II rok - 2014/2015 | | | | | | | | III rok - 2015/2016 | | | | | | | |
|-----------------------------------|--------------|------------|-------|-------|------|------|------|-------------------|-----|-----|------|-------|-----|-----|------|--------------------|-----|-----|------|-------|-----|-----|------|---------------------|-----|-----|------|-------|-----|-----|------|
| | | | | | | | | 1 sem | | | | 2 sem | | | | 3 sem | | | | 4 sem | | | | 5 sem | | | | 6 sem | | | |
| | | | | | | | | w | ćw. | lab | ECTS | w | ćw. | lab | ECTS | w | ćw. | lab | ECTS | w | ćw. | lab | ECTS | w | ćw. | lab | ECTS | w | ćw. | lab | ECTS |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fizyka - ekonofizyka | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wstęp do algebry | zal | 60 | 30 | 15 | | 15 | | 2 | 1 | 1 | 6 | | | | | | | | | | | | | | | | | | | | |
| Matematyka 1 - RRC | egz 1 | 135 | 60 | 60 | | 15 | | 4 | 4 | 1 | 10 | | | | | | | | | | | | | | | | | | | | |
| Matematyka 2,3 | egz 2,3 | 255 | 105 | 105 | | 45 | | | | | | 4 | 4 | 2 | 10 | 3 | 3 | 1 | 8 | | | | | | | | | | | | |
| Elementy rach.p-stwa | egz 2 | 60 | 30 | 30 | | 0 | | | | | | 2 | 2 | | 4 | | | | | | | | | | | | | | | | |
| Podstawy fizyki 1,2,3,4 | egz 1,2,3,4 | 450 | 225 | 225 | | 0 | | 4 | 5 | | 10 | 4 | 4 | | 8 | 4 | 4 | | 8 | 3 | 2 | | 6 | | | | | | | | |
| I pracownia fizyczna 1 i 2 | zal | 90 | 0 | 0 | | 90 | | | | | | | | 3 | 5 | | | 3 | 5 | | | | | | | | | | | | |
| Elementy astronomii i astrofizyki | egz 6 | 45 | 45 | 0 | | 0 | | | | | | | | | | | | | | | | | | | | | 3 | 3 | | | |
| Programy użytkowe | zal | 45 | 15 | 0 | | 30 | | 1 | | 2 | 4 | | | | | | | | | | | | | | | | | | | | |
| Praktyczny wstęp do program. | zal | 60 | 15 | 0 | | 45 | | | | | | 1 | | 3 | 3 | | | | | | | | | | | | | | | | |
| Obli. numer. i symbol. w fizyce | zal | 60 | 30 | 0 | | 30 | | | | | | | | | | | | | | | | | | 2 | | 2 | 4 | | | | |
| Elementy mech.teor.I STW | egz 3 | 60 | 30 | 30 | | 0 | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | | | | | |
| Fizyka kwantowa | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | |
| Elementy fiz.statystycznej | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | |
| Ekonomia 1 | zal | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 3 | | | | | | | | |
| Ekonomia 2 | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | |
| Procesy stoch.w ekonomii | egz 4 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | |
| Prawo handlowe | egz 5 | 30 | 30 | 0 | | 0 | | | | | | | | | | | | | | | | | 2 | | | 4 | | | | | |
| Teoria p.fazowych i zjw.kryt. | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | |
| Umowy w obrocie gosp. | zal | 30 | 0 | 30 | | 0 | | | | | | | | | | | | | | | | 2 | | | 3 | | | | | | |
| Ekonofizyka 1 | egz 5 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 5 | | | | | | | | |
| Ekonofizyka 2 | egz 6 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | | | | | | | 2 | 2 | 6 | | | |
| Podstawy zarządzania | egz 6 | 30 | 30 | 0 | | 0 | | | | | | | | | | | | | | | | | | | 2 | | 2 | | | | |
| Rachunkowość | egz 6 | 60 | 30 | 30 | | 0 | | | | | | | | | | | | | | 2 | 2 | | 4 | | | | | | | | |
| Lektorat | egz 5 | 180 | 0 | 180 | | 0 | | | | | | | | | | 4 | | 4 | | 4 | | 4 | | 4 | | 4 | | | | | |
| BHP i ochr.wła.intelektualnej | zal | 15 | 15 | 0 | | 0 | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | |
| Praktyka | zal | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | 3 | | | | | | | | | |
| WF | zal | 30 | 0 | 30 | | 0 | | | | | | | | | | | | | | | | | | | 2 | | 1 | | | | |
| Seminarium | zal | 30 | 0 | 30 | | 0 | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | |
| Praca dypl. + egz. Dyplom. | egz 6 | 0 | 0 | 0 | | 0 | | | | | | | | | | | | | | | | | | | | | | 10 | | | |
| Razem | | 2205 | 930 | 1005 | | 270 | | 11 | 10 | 4 | 30 | 11 | 10 | 8 | 30 | 9 | 13 | 4 | 30 | 12 | 14 | 0 | 32 | 10 | 14 | 2 | 31 | 9 | 6 | 0 | 27 |
| Razem wykt. Ćwicz. | | | | | | | | 25 | | | | 29 | | | | 26 | | | | 26 | | | | 26 | | | | 15 | | | |



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i Astronomii**
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