

PLAN OF REGULAR STUDIES

Subject area of studies: **ASTRONOMY**

Type of studies: REGULAR DAILY 1st DEGREE STUDIES

Enrolment 2023/2024

duration: 6 semesters

University of Zielona Góra

Faculty of Physics and Astronomy

| No. | SUBJECT | Number of teaching hours | ECTS | Form of receiving a credit | SEMESTER 1 | | | | | SEMESTER 2 | | | | | SEMESTER 3 | | | | | SEMESTER 4 | | | | | SEMESTER 5 | | | | | SEMESTER 6 | | | | |
|-----|---|--------------------------|------|----------------------------|---------------------|---|---|-----|------|---------------------|---|---|-----|------|---------------------|---|---|-----|------|---------------------|---|---|-----|------------------|---------------------|---|---|---|-----|---------------------|---|---|---|-----|
| | | | | | Form of instruction | | | | | Form of instruction | | | | | Form of instruction | | | | | Form of instruction | | | | | Form of instruction | | | | | Form of instruction | | | | |
| | | | | | L | T | D | L/S | ECTS | L | T | D | L/S | ECTS | L | T | D | L/S | ECTS | L | T | D | L/S | Forma zaliczenia | ECTS | L | T | D | L/S | ECTS | L | T | D | L/S |
| 1 | Foreign language | 120 | 8 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Physical education | 60 | 0 | c | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Humanistic subject | 30 | 3 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Social Subject | 15 | 2 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Introduction to higher physics and mathematics | 30 | 2 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Mathematical analysis I | 120 | 8 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Mathematical analysis II | 75 | 5 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Algebraic and geometrical methods in physics | 75 | 6 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Metrology | 30 | 2 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Mathematical methods in physics | 60 | 6 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Fundamentals of physics I - Mechanics | 90 | 7 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Fundamentals of physics II - Thermodynamics | 60 | 5 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Fundamentals of physics III - Electricity and magnetism | 75 | 7 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Fundamentals of physics IV - Optics, modern physics | 75 | 6 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Physics laboratory I - Mechanics, Thermodynamics | 45 | 4 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | Physics Laboratory II - Electricity and magnetism | 45 | 4 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Physics laboratory III - Optics, modern physics | 45 | 4 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Classical and relativistic mechanics | 60 | 6 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Electrodynamics | 60 | 5 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Quantum mechanics foundations | 60 | 6 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Computer laboratory I - information technologies | 45 | 3 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Computed data acquisition and processing | 30 | 2 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Fundamentals of programming | 60 | 5 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Data structures and algorithms | 60 | 4 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Scientific calculations and numerical methods | 75 | 5 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Astronomy fundamentals | 30 | 2 | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Astronomical instruments | 60 | 4 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | The basics of spherical astronomy and astrometry | 60 | 5 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Introduction to celestial mechanics and solar system | 60 | 5 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Physics of stars and the scattered matter | 60 | 4 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Star systems and the structure of the universe | 60 | 3 | E c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Introduction to the astrophysics of compact objects/Pulsar astrophysics | 30 | 2 | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Laboratory of the fundamentals of optical astronomy/radioastronomy | 45 | 4 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | Observational methods and data analysis in optical astronomy/radioastronomy | 60 | 5 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | Laboratory of advanced analysis of optical data/radio astronomy data | 75 | 6 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Monographic lecture | 30 | 4 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Undergraduate seminar | 75 | 8 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Undergraduate laboratory | 45 | 7 | c/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Batchelor's thesis | 0 | 6 | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* kolorem niebieskim oznaczono moduły/zajęcia wybieralne

| | | |
|----------------------|-------------|------------|
| General module | 225 | 13 |
| Maths-physics module | 1005 | 83 |
| IT Module | 270 | 19 |
| Astronomy Module | 690 | 65 |
| Praktyki | 0 | 0 |
| Total | 2190 | 180 |

| |
|------------|
| 30 |
| 345 |
| 60 |
| 0 |
| 435 |

| | |
|-----------|------------|
| 0 | 90 |
| 25 | 180 |
| 5 | 75 |
| 0 | 90 |
| 30 | 435 |

| | |
|-----------|------------|
| 5 | 30 |
| 14 | 180 |
| 5 | 0 |
| 6 | 120 |
| 30 | 330 |

| | |
|-----------|------------|
| 2 | 30 |
| 17 | 180 |
| 0 | 60 |
| 10 | 165 |
| 29 | 435 |

| | |
|-----------|------------|
| 2 | 45 |
| 16 | 60 |
| 4 | 75 |
| 13 | 120 |
| 35 | 300 |

| | |
|-----------|------------|
| 4 | 0 |
| 6 | 60 |
| 5 | 0 |
| 10 | 195 |
| 25 | 255 |

| |
|-----------|
| 0 |
| 5 |
| 0 |
| 26 |
| 31 |

| | | |
|---------------------------|-------------|------------|
| Total w/o practice | 2190 | 180 |
|---------------------------|-------------|------------|