

**Physics**  
**in the discipline of Physical Sciences**  
**English–language Study Programme in Physics**  
**at the Doctoral School of Exact and Natural Sciences**

I

**General provisions**

1. The study programme in Physics has been established according to the Act of 20 July 2018 on the Law on Higher Education and Science and the guidelines applicable at the Jagiellonian University in Kraków.
2. The study programme leads to learning outcomes for qualifications defined as level 8, according to the Polish Qualifications Framework.
3. The study programme lasts eight terms.
4. The programme is conducted primarily in English.
5. Detailed requirements and the admission criteria are defined by the University regulations as accepted by the University Senate.
6. A PhD student submits an Individual Research Plan to the supervisor after 12 months from the day of the commencement of the study programme.
7. A number of ECTS points (European Credit Transfer and Accumulation System) allocated to the study programme in the discipline of Physics is a minimum 40 points, with a minimum of 24 points to be obtained by the end of the fourth semester.
8. The rules on achieving learning outcomes and the manner of their evaluation are specified in the syllabuses of the individual courses.

II

**Occupational internship**

1. Occupational internships programmes are realized in the form of conducting classes with students as well as assisting in this process.
2. Occupational internships can also take the form of conducting activities with the purpose of popularizing science.
3. The principles and forms of internship for PhD students of physics programme are determined by the manager.

4. The number of hours allocated to an occupational internship programme must not exceed 60 hours per academic year.

### III

#### **Evaluation of study and scientific programme accomplishments**

1. The supervisor monitors the study programme implemented by the PhD student and his/her Individual Research Plan.
2. Annually, no later than by 30 September, the supervisor submits to the study programme manager written information on the implementation of the individual research plan and the assessment of the PhD student's progress.
3. The study programme manager assesses the implementation of the study programme and research programme on the basis of the information from supervisors and a report from the University IT system.
4. Changing an Individual Research Plan, in particular changing or postponing some of the PhD student's duties to another date, requires the approval of the study programme manager.
5. The study programme manager may decide to accept as part of the performance of duties (with the appropriate allocation of ECTS points) courses or classes not specified in the study programme.
6. By the end of the 4<sup>th</sup> semester, the PhD student shall be subject to the mid-term evaluation before a committee appointed by the director.
7. The evaluation date is established by the programme manager.
8. 30 days before the scheduled committee meeting, the PhD student shall submit to the programme manager a written report on the implementation of the individual research plan. The report must be approved by the supervisor before submission.
9. Mid-term evaluation committee meetings shall be attended by committee members and the PhD student in the parts to which he was invited.

## IV

## Schedule for the study programme in Physics

| Doctoral School of Exact and Natural Sciences Study Programme: Physics                       |           |   |                                      |        |                     |             |
|--|-----------|---|--------------------------------------|--------|---------------------|-------------|
| Item   | Objective | Description   | PQF*                                 | Term   | ECTS                | No of hours |
| <b>OBLIGATORY CLASSES IN DOCTORAL SCHOOL OF EXACT AND NATURAL SCIENCES (MINIMUM 14 ECTS)</b> |           |   |                                      |        |                     |             |
| Specialist PhD course  |           | Lecture - presentation of the latest results of world research and current research problems in a given discipline (selected theories, methods, models and relationships between them) or interdisciplinary lecture. It may include exercises or problems to be solved outside the lecture or elements of group work or in the form of workshops. Assessment: <b>exam</b> . | P8S_WG<br>P8S_KK                     | I-VIII | 2-4/30h<br>(min. 4) | 30-120      |
| PhD seminar  |           | Seminar: preparation for research, analysis and creative synthesis of world scientific achievements, identifying and solving research problems, participating in the exchange of experiences and scientific ideas.<br>Assessment: <b>assessment of paper and participation</b> .  | P8S_WG<br>P8S_UK<br>P8S_UW<br>P8S_UO | I-VIII | 1/15h<br>(min. 4)   | 60-120      |
| PNDA course (Foundations of academic teaching)   |           | Theoretical preparation for work of an academic teacher. Developing communication skills, knowledge transfer, and ability to assess the work of others.<br>Assessment: <b>credit (or another, determined by the teacher)</b> .  | P8S_UU<br>P8S_KR                     | I-VI   | 2-4<br>(min 2)      | 15-30       |
| English  |           | English at C1 level; if the PhD students holds a C1   | P8S_UK                               | I-IV   | 4<br>(min 4)        | 60          |

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|  | certificate, they may obtain credit from JCJ without having to attend classes, and the PhD student may choose a different language course at any level. Assessment: <b>exam (or another set by the teacher).</b> |                            |        |                                 |   |
| <b>JOINT OPTIONAL ACTIVITIES FOR THE DOCTORAL SCHOOL OF EXACT AND NATURAL SCIENCES (MINIMUM 4 ECTS POINTS)</b> |  |                            |        |                                 |   |
| Doctoral School seminar  | A monthly interdisciplinary seminar with English lectures by invited researchers. Assessment: <b>credit</b>  | P8S_WG<br>P8S_UW<br>P8S_UK | I-VIII | max 4 ECTS<br>(1 ECTS per year) | minimum<br>6 seminars per year          |
| Foreign language   | Second foreign language<br>Assessment: <b>exam</b>   | P8S_UU                     | I-IV   | 4                               | 60                                      |
| Polish for foreigners  | Assessment: <b>exam</b>  | P8S_UU                     | I-VIII | 4                               | 60                                      |
| General knowledge development classes  | A course selected from the list announced before a given academic year, e.g. philosophy, ethics, artificial intelligence, cosmology.<br>Assessment: <b>exam</b>  | P8S_UW<br>P8S_KR<br>P8S_WK | I-VIII | 2 for 30h                       | 30 or 60                                |
| Classes developing professional competences and "soft" skills  | A course selected from the list announced before a given academic year, e.g. career planning, managerial competence, business communication. Assessment: <b>specified in the subject syllabus</b>                | P8S_WK<br>P8S_KR<br>P8S_KO | I-VIII | 2 for 30h                       | 30                                      |
| <b>OPTIONAL CLASSES DEVELOPING PROFESSIONAL COMPETENCES (minimum 4 ECTS)</b>                                   |  |                            |        |                                 |   |
| Tutorial with the supervisor   | Preparing an individual research project, verifying the work plan, preparation of public speeches on the project, editorial work on project publication.   | P8S_KK<br>P8S_WG<br>P8S_UO | I-VIII | 1 for 15h                       | 15 or 30 or 45 or 60h, max 15h per year |

|  |   |                  |        |                            |                            |
|--|---|------------------|--------|----------------------------|----------------------------|
| PNDA (Foundations of academic teaching) workshop   | Teaching works hops. Assessment: <b>credit</b>  | P8S_UK           | I-VI   | 1 for 15h                  | 15-30                      |
| Courses for acquiring competences to conduct an individual research plan (e.g. summer schools, courses at other universities, including foreign universities)  | Assessment: <b>as per course programme</b>  | P8S_WG<br>P8S_UW | I-VIII | As per course requirements | As per course requirements |
| <b>COURSES DEVELOPING TEACHING COMPETENCES</b>   |   |                  |        |                            |                            |
| Teaching classes as part of professional internship  | Preparation for academic teaching, developing communication skills and knowledge transfer. Assessment by the subject coordinator, taking into account the opinions of students. | P8S_UU<br>P8S_KO | I-VIII | 1 for 15h                  | 240                        |
| <p>Additional training:</p> <ol style="list-style-type: none"> <li>1. The PhD students entering their study programme are required to complete training in Health and Safety in Education.</li> <li>2. First Aid course completed by the end of the second term</li> <li>3. The PhD students who plan research involving vertebrates are obliged to complete training to obtain appropriate licenses.</li> </ol> |   |                  |        |                            |                            |

\* Polish Qualification Framework (PQF) in accordance with the Regulation of the Minister of Science and Higher Education on the characteristics of the second degree learning outcomes for the qualifications at the levels 6-8 of the Polish Qualifications Framework.

## V Final provisions

The study programme Physics in the discipline of Physical Sciences at the Doctoral School of Exact and Natural Sciences enters into force on the day of the adoption of the Resolution.