

**Education Programme in Physics
in the discipline of physical sciences
conducted in English
at the Doctoral School of Exact
and Natural Sciences**

**I
General provisions**

1. The education programme in Physics has been developed according to the Act of 20 July 2018 on Law on Higher Education and Science, and the guidelines in force at the Jagiellonian University in Kraków.
2. The education programme leads to achieving learning outcomes for the qualifications at Level 8 of the Polish Qualification Framework (PQF).
3. The education programme lasts 8 semesters.
4. English is a medium of instruction of the education programme in Physics.
5. Detailed requirements and eligibility criteria for admission to the programme are defined in the admission terms and conditions as approved by the Jagiellonian University Senate.
6. Within 12 months of the commencement of the education programme, a doctoral student shall submit an Individual Research Plan (IRP) to the programme coordinator for their opinion and submission to the Director of the Doctoral School.
7. A doctoral student is required to achieve a minimum of 40 ECTS credits (ECTS – European Credit Transfer and Accumulation System) allocated to the Physics education programme and to attain all the required learning outcomes as specified at the Level 8 of the Polish Qualification Framework. 24 ECTS are to be achieved by the end of the semester in which mid-term assessment is conducted. A doctoral student is obliged to achieve all the learning outcomes at the Level 8 of the Polish Qualification Framework.
8. Detailed instructions for achieving and assessing learning outcomes shall be specified in the syllabuses of the individual courses.

**II
Professional traineeship**

1. Professional traineeship shall take the form of teaching or co-teaching classes.
2. In agreement with and at the application of the doctoral student, the programme coordinator may accept other forms of professional traineeship, including didactic

traineeship, such as conducting classes promoting science, provided that such a form ensures achieving all the learning outcomes allocated to professional traineeship.

3. The rules for teaching traineeship for doctoral students of the education programme in Physics shall be determined by the coordinator of this programme.
4. The number of hours of professional traineeship shall not exceed 60 teaching hours (a teaching hour equals 45-minutes) per one academic year.

III

Study and research progress assessment

1. The supervisor(s), in cooperation with the programme coordinator and the Director of the Doctoral School, shall supervise implementing the education programme and the Individual Research Plan of the doctoral student.
2. Annually, but no later than by 17 September, a doctoral student shall submit to the programme coordinator a written report on the implementation of the Individual Research Plan, reviewed by the supervisor(s) and the auxiliary supervisor.
3. The programme coordinator shall assess the degree of implementing the study and research work based on the information from the doctoral student as defined in Point 2, and a report from the University Study-Oriented System (USOS).
4. Changes to the Individual Research Plan, in particular modifying or rescheduling the doctoral student's duties, shall require consulting the programme coordinator.
5. The programme coordinator may decide to reschedule the doctoral student's duties resulting from the education programme and to accept courses or activities not specified in the education programme as part of the performance of the duties (with the relevant allocation of ECTS credits), provided that no changes to the Individual Research Plan are needed.
6. When additional funding is available or in well justified cases, the programme coordinator, in consultation with School representatives of the Jagiellonian University PhD Student Association and the Director of the Doctoral School, may oblige doctoral students to take courses not specified in the education programme.
7. By the end of the 24th month of education, a doctoral student shall be subject to mid-term assessment before the assessment committee appointed by the Director of the Doctoral School.
8. The date of the mid-term assessment is established by the Director of the Doctoral School on the proposal of the programme coordinator.
9. One month before the scheduled meeting of the mid-term assessment committee, a doctoral student shall submit to the programme coordinator a written report on the implementation of the education programme and Individual Research Plan. The report has to be approved by the supervisor(s) and the auxiliary supervisor before submission.
10. Meetings of the mid-term assessment committee shall be attended by the committee members, and the doctoral student in those parts to which they have been invited, in accordance with separate provisions.

IV Schedule

SCHEDULE FOR THE EDUCATION PROGRAMME IN PHYSICS

DOCTORAL SCHOOL OF EXACT AND NATURAL SCIENCES EDUCATION PROGRAMME IN PHYSICS						
ITEM	AIM	DESCRIPTION	PQF/PRK*	SEME STER	NO OF ECTS	NO OF HOURS
OBLIGATORY COURSES IN DOCTORAL SCHOOL OF EXACT AND NATURAL SCIENCES (16 ECTS MINIMUM)						
Specialist course for PhD students		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: exam or another, determined by the lecturer.	P8S_WG P8S_KK	I-VIII	2-4/30h (min. 4)	30-120
Doctoral Seminar conducted at the Faculty of Physics, Astronomy and Applied Computer Science		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. Assessment: assessment of paper and participation.	P8S_WG P8S_UK P8S_UW P8S_UO	I-VIII	1/15h (min. 4)	60-120
Introduction to academic didactics		Theoretical preparation for work of an academic teacher. Developing communication skills, knowledge transfer, and ability to assess the work of others. Assessment: credit (or another, determined by the lecturer).	P8S_UU P8S_KR	I-VI	2-4 (min 2)	15-30

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 or additional trainings offered during the academic year. Assessment: determined by the lecturer.	P8S_WK P8S_KR P8S_KO	I-VIII	2 for 30h	30
English	English at C1 level; if a PhD student holds a C1 certificate, they may obtain credit from JCJ without having to attend classes, and the PhD student may pursue another language at any level. Assessment: examination	P8S_UK	I-IV	4 (min 4)	60
JOINT ELECTIVE ACTIVITIES FOR THE DOCTORAL SCHOOL OF EXACT AND NATURAL SCIENCES (4 ECTS MINIMUM)					
Doctoral School Seminar	Monthly interdisciplinary seminar with lectures in English offered by the guest researchers Assessment: credit based on participation	P8S_WG P8S_UW P8S_UK	I-VIII	1 ECTS per year (max 4 ECTS)	minimum 6 seminars per year
Modern foreign language	As a second foreign language Assessment: examination	P8S_UU	I-IV	4	60
Polish for foreigners	Assessment: examination	P8S_UU	I-VIII	4	60
General knowledge development	One course out of a range of courses offered before each academic year (e.g. a course in philosophy, ethics, IA or cosmology) Assessment: examination	P8S_UW P8S_KR P8S_WK	I-VIII	2 for 30h	30 or 60

ELECTIVE COURSES DEVELOPING PROFESSIONAL COMPETENCES (4 ECTS MINIMUM)					
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 P8S_WG P8S_UO	I-VIII	1 for 15h	15 or 30 or 45 or 60h, max 15h per year
Introduction to academic didactics	Teaching workshops. Assessment: credit	P8S_UK	I-VI	1 for 15h	15-30
Other courses for acquiring competences to implement an individual research plan	E.g.: summer schools, courses at other universities, including foreign universities. Assessment: as per course programme/syllabus	P8S_WG P8S_UW	I-VIII	As per course requirements	As per course requirements
OBLIGATORY COURSES DEVELOPING TEACHING COMPETENCES					
Teaching classes as part of professional traineeship	Preparation for academic teaching, developing communication skills and knowledge transfer. Assessment: by the subject coordinator, taking into account the opinions of students.	P8S_UU P8S_KO	I-VIII	1 for 15h	60h per year in I, II, III year of education and 30h per year in IV year of education

*PQF /PRK – Polish Qualifications Framework / Polska Rama Kwalifikacji in accordance with the Regulation of the Minister of Science and Higher Education on the characteristics of second-level learning outcomes for qualifications at Levels 6-8 of the Polish Qualifications Framework.

<https://prk.men.gov.pl/en/1en/>

Conducting research and preparing a doctoral dissertation within the meaning of Article 187(3) of the Act of 20 July 2018 - Law on Higher Education and Science (i.e. Journal of Laws of 2023, item 742 as amended) fulfills in part achieving all types of learning outcomes for qualifications at Level 8 of the PQF. The achievement of these outcomes is verified by the supervisor.

Doctoral students with disabilities and persons in a special health situation may apply for the adaptation of the education process realisation to their needs, according to the principles specified in the order of the Jagiellonian University Rector.

V

Final provision

The *Physics* education programme in the discipline of physical sciences at the Doctoral School of Exact and Natural Sciences shall enter into force on the date of the Resolution.