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Programme of study at the Doctoral School of Natural and Agricultural Sciences

General explanations

The Doctoral School of Natural and Agricultural Sciences (hereinafter referred to as: the Doctoral School) offers implementation of research projects and courses covered by the programme of study. The programme of study includes compulsory and optional courses entitling in total to 46 ECTS points, including 26 points for compulsory courses and 20 points for optional courses.

The programme offered to doctoral students is dual in nature: complementary (obtainment of missing knowledge/skills) and expanding (obtainment of knowledge in the research area and related disciplines, soft skills necessary for the functioning in the social and economic environment, and for the cooperation with representatives of other social groups).

A doctoral student shall complete a majority of compulsory courses within the first 4 semesters. In the following 4 semesters the student shall, in the first place, carry out their research as provided for in the Individual Research Plan (hereinafter referred to as: IRP) while at the same time improving their knowledge and skills in optional courses.

Carrying out research projects under IRP entails the need to complete internship programmes outside the Unit in Charge. A doctoral student should be free to use such opportunities, unrestricted by the requirement to attend any classes. Therefore, the timetable of courses whereunder a majority of compulsory courses can be completed within the first 4 semesters as well as the possibility to implement the programme as an individual plan of study supports doctoral students' mobility and facilitates international contacts.

In consultation with their doctoral dissertation supervisor, a doctoral student should be able to decide where and in what form they will complete optional courses that are highly specialist and inclusive in terms of the research process (such as seminars, workshops with prominent researchers, specialist summer schools, including ones in other cities or countries, methodology courses, courses pertaining to specialist research methods and tools, conference trips) as well as courses in which the doctoral student can develop skills that are necessary for work in the scientific domain, such as issues related to ethics, transfer of knowledge, commercialisation of research, applying for grants, or public speaking.

At the Doctoral School courses are delivered by the staff of the Units in Charge or commissioned from other research units.

Programme of study

1. The programme of study at the Doctoral School is delivered in accordance with the description included in this document.
2. The programme of study at the Doctoral School leads to the attainment of the learning outcomes specified in Appendix 1. Detailed rules for the accomplishment of specific learning outcomes and forms of assessment thereof are set forth in the syllabuses of the courses concerned.
3. The rules governing examination and granting credits for the completion of courses are set forth in the syllabuses of the courses concerned.

Compulsory courses

1. Compulsory courses include:
    a. Block of thematic lectures (at least 60 hours, which is equivalent to 4 ECTS points). The courses in the form of a lecture/tutorial are intended to broaden a doctoral student's knowledge of recent achievements in biology, agriculture and horticulture, animal production and fisheries science. The courses are offered every year and are grouped into four thematic blocks:
        i. – systematics and evolutionism;
        ii. – ecology and environmental protection;
        iii. – contemporary trends in animal raising and breeding, and in plant cultivation;
        iv. – biochemistry and physiology of organisms.
    b. Development of a scientific career and communication in science (at least 30 hours, which is equivalent to 2 ECTS points). Courses delivered in the form of a lecture and practical classes are intended to provide a doctoral student with an opportunity to gain knowledge of research financing, preparation of applications and implementation of research projects, as well as to develop a student's ability to perceive and absorb information, and communicate scientific knowledge. The courses prepare the students to apply for the financing of research projects and to present research findings in the form of presentations, posters and scientific and popular science publications;
    c. Statistics (at least 30 hours, which is equivalent to 2 ECTS points). The course is delivered in the form of a tutorial and practical classes and is intended to improve the student's understanding of the types of data and statistical methods applied in biological sciences, agriculture and horticulture, animal production and fisheries science, selection of methods that are appropriate for a particular type of experiment, design of experiments and interpretation of the findings of empirical research;
    d. Philosophy (at least 30 hours, which is equivalent to 2 ECTS points) The course is delivered in the form of a lecture or tuition and is intended to improve the student's knowledge of the key problems in methodology and general philosophy of science, and of selected issues including, but not limited to, philosophy of nature;
    e. Methodology of research – work, consultations with the doctoral dissertation supervisor (at least 50 hours per year, which is equivalent to 3 ECTS points per year).

Cooperation of a doctoral student with their doctoral dissertation supervisor involves, in the first place, development of an Individual Research Plan, discussion on the course of the research work conducted by the doctoral student, drafting of a doctoral dissertation, and preparation of a presentation of the findings in a textual form (conference abstracts, scientific publications and popular science publications, etc.), oral presentations (papers) and posters. Work with the doctoral dissertation supervisor may be also related to a doctoral student's involvement in the research work (projects) conducted by the supervisor or by other staff members, application for grants, ethics in research, transfer of knowledge to the society, and commercialisation of research. The goal of the supervisor-student cooperation is to convey knowledge and skills by the supervisor, to familiarise the doctoral student with the fundamental skills necessary for the work in the scientific domain and to train the student in autonomous and team-based research work. Such work is credited along with the doctoral student's semester report;

f. Scientific Reporting Session (10 hours per year, which is equivalent to 1 ECTS point). While participating in the Scientific Reporting Session (in the form of a seminar), a doctoral student can familiarise themselves with the research work carried out by other doctoral students and develop the skill of presentation and confrontation of the findings of their own research, as well as is taught how to manage and reduce stress associated with public speaking. The course is intended to develop a doctoral student's skill in communicating with the scientific community and forms part of the basis for assessment of the doctoral student's progress in their research work. The credit for the completion of the course is given or refused on an annual basis by the Head of the Doctoral School based on attendance and a paper delivered.

2. The aggregate number of ECTS points for the compulsory courses completed throughout the programme period is 26, of which 10 points for the courses described in Section 1. (a)–(d) (obtained in the first two years of the programme), 12 points for the courses described in Section 1. (e) and 4 points for the courses described in Section 1. (f).

Optional courses

1. Optional courses improving professional skills include:
    a. Seminars in the area of biological sciences, agriculture and horticulture, animal production and fisheries science, and related sciences, delivered by specialists from Poland and other countries. Participation in seminars allows a student to obtain a more in-depth knowledge in selected fields of study. A doctoral student may choose a single lecture/seminar. For the participation in seminars a doctoral student obtains 1 ECTS point per 5 hours (participation in 5 seminars).
    b. Doctoral seminars organised by the Doctoral School Students' Council to expand the knowledge and improve communication skills. For the participation in the seminars a doctoral student obtains 1 ECTS point for 5 hours (participation in 5 seminars).
    c. Participation in the scientific community's life, in various forms of scientific meetings (e.g. seminars, sessions, conferences, workshops), held in Poland and abroad. It provides a doctoral student with an opportunity to broaden their knowledge on their field of study and improve communication skills. The doctoral student is

entitled to 2 ECTS points per each event they actively participated in (paper delivered and/or poster presented), and in the case of workshops and training courses – 0.5 ECTS points for participation up to 4 hours and 0.5 ECTS points for each further 4-hour participation, but not more than 2 ECTS points in total.

d. Presentation of science to the society. Dissemination activities enhance a doctoral student's involvement in a promotion of science. While taking part in a preparation of a presentation/lecture/class for mixed-age social groups, a doctoral student improves their skill of presenting research findings to audiences of varied education backgrounds and interests. A doctoral student may choose from among projects promoting science in society implemented by or outside the Units in Charge. The doctoral student is entitled to 2 ECTS points per each event they actively participated in.
e. Work for the community of doctoral students, developing social competences - as the chairperson, deputy chairperson and member of the Doctoral School Students' Council; a doctoral student is entitled to, respectively, 2, 1 and 1 ECTS point per year.
f. Training courses related to protection of intellectual property, managerial competences, copyrights, ethics, transfer of knowledge to the economic and social domain, commercialisation of research, applying for grants, etc. A doctoral student is entitled to 0.5 ECTS points for courses of up to 4 hours and 0.5 ECTS points for each further 4-hour course, but not more than 2 ECTS points in total.

2. The aggregate number of ECTS points for optional courses throughout the programme period may not be lower than 20, of which not less than 5 ECTS points per year.

Credits for the completion of compulsory and optional courses

1. A doctoral student should obtain credits for the completion of compulsory courses within the first 4 semesters. In exceptional situations, upon a doctoral student's request supported by the doctoral dissertation supervisor, the Head of the Doctoral School may give their consent to credits being obtained for the completion of compulsory courses in subsequent semesters.
2. A doctoral student may obtain credits for the completion of optional courses successively within the 8 semesters of the programme of study at the Doctoral School.
3. Credits for the completion of compulsory courses are given/refused by teachers in accordance with the rules laid down in the course syllabuses.
4. Credits for the completion of optional courses are given/refused by the Head of the Doctoral School based on the doctoral student's documented participation presented in the semester report.
5. Scoring ECTS points for optional courses in excess of the number required by the programme does not release a student from the obligation to obtain credits for the completion of the compulsory courses.
6. Credits for the completion of courses are given/refused on a semester basis.

Doctoral Student's research work

1. A doctoral student's responsibilities:
    a. A doctoral student is obliged to conduct their own autonomous research under the guidance of a doctoral dissertation supervisor;
    b. A doctoral student should cooperate as a member of research teams on a national and/or international scale;
    c. Within the first 12 months of study, a doctoral student should draft, in consultation with their doctoral dissertation supervisor(s), an Individual Research Plan;
    d. As part of their programme of study at the Doctoral School, a doctoral student should publish at least one scientific paper in a scientific journal or in peer reviewed materials from an international conference, which, in the year the paper was published in its final form, were listed in JCR; or one scientific monograph published by a publishing house which, in the year the monograph was published in its final form, was included in the list compiled in accordance with regulations promulgated pursuant to Article 267(2)(2)(A) of the Polish Law on the Higher Education System and Science; or a chapter in such a monograph, covering a topic that is in line with the area of study offered by the Doctoral School.
2. A doctoral student's rights:
    a. While drafting an Individual Research Plan and a doctoral dissertation, and implementing research projects, a doctoral student shall be provided with substantive support from their doctoral dissertation supervisor;
    b. A doctoral student may apply for an international research scholarship or scientific training agreed with the doctoral dissertation supervisor, director of the relevant Unit in Charge and the Head of the Doctoral School;
    c. A doctoral student who conducts research may apply for the co-financing thereof to the Unit in Charge employing their doctoral dissertation supervisor.

Learning outcomes

The outcome of a doctoral student's own research work carried out under the supervision of a doctoral dissertation supervisor is a doctoral dissertation. Implementation of the programme of study at the Doctoral School prepares a student for research as well as research and development work, and, in particular, leads to attainment of the intended learning outcomes as regards the following:

a. Having a vast knowledge in the following disciplines: biological sciences, agriculture and horticulture, animal production and fisheries science, and related sciences,
b. Having a knowledge covering the most recent achievements of science to an extent enabling revision of the existing paradigms;
c. Having professional skills related to identification, analysis and explanation of phenomena, which are necessary for autonomous research work;
d. Skilful application of research methods and methods of analysis of research findings;

e. Skilful sharing of one's own knowledge and dissemination of the latest achievements in the field of biological sciences, agriculture and horticulture, animal production and fisheries science, and related sciences;
f. Ability to communicate and interpret research findings, and to conduct a discussion;
g. Social competences related to research activities and the social role of a scholar.

Manner of assessment of the implementation of the programme of study and research work

1. Detailed rules governing attainment of learning outcomes and forms of assessment thereof are specified in course syllabuses.
2. Research conducted for the doctoral degree and preparation of a doctoral dissertation as provided for in Article 187 (3) of the Polish Act of 20 July 2018 – the Law on the Higher Education System and Science (consolidated text: Journal of Laws (Dz. U.) of 2023, Item 742, as amended) fulfils in part the requirement to attain all the types of the learning outcomes for the PQF Level 8 qualification. Attainment of these learning outcomes is verified by the doctoral dissertation supervisor.
3. Following the end of each semester, a doctoral student shall submit a report on the research work and on the implementation of the programme of study and the Individual Research Plan, in the form conforming to the model semester report binding for a given academic year.
4. Implementation of the programme of study and of the research conducted by the doctoral student shall be assessed by the Head of the Doctoral School based on the report submitted by the student and the evaluation issued by the doctoral dissertation supervisor.
5. Requirements to be met in order to complete an academic semester:
    a. credits received for the completion of the courses provided for in the programme of study;
    b. submission of a report on the completion of the doctoral student's duties.