Annex No. 20
to the minutes of the 11th meeting of the
Scientific Council
on March 20, 2025

Resolution No. 20 of the Scientific Council of the IA&FR PAS in Olsztyn
from March 20, 2025

on the adoption of the Education Program at the Interdisciplinary Doctoral School of Agricultural Sciences

Programme of studies at the Interdisciplinary Doctoral School of Agricultural Sciences

§1

1. Education at the Doctoral School (hereinafter referred to as the "School") is carried out within the following disciplines:

- animal science and fisheries – run by the Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences in Olsztyn (IRZiBŻ PAN),
- nutrition and food technology – run by the Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences in Olsztyn (IRZiBŻ PAN),
- veterinary science – run by the National Veterinary Institute - National Research Institute in Puławy (PIWET-PIB),
- agriculture and horticulture – run by the Bohdan Dobrzański Institute of Agrophysics of the Polish Academy of Sciences in Lublin (IA PAN).

§2

1. Education at the School lasts 4 years and creates conditions for:

- conducting scientific research and preparing a doctoral dissertation in an interdisciplinary scientific environment,
- consolidating and expanding knowledge in the field of agricultural sciences,
- acquiring practical skills useful in scientific and implementation work,
- presenting the results of scientific research,

within the framework of individual research plans of doctoral students, adapted to the diverse specificity of the disciplines listed in § 1, at level 8 of the Polish Qualifications Framework (based on Art. 7 sec. 3 of the Act of 22 December 2015 on the Integrated Qualifications System) .

§3

1. The curriculum at the Doctoral School includes classes that prepare the doctoral student for scientific and research work. It does not include the total time allocated for the completion of the doctoral thesis. The time of research and scientific work required to complete the doctoral thesis is established with the doctoral student by the supervisor.

2. Education at the School is carried out through:

- Obligatory coursesrelated to the School disciplines.
- Elective courses – specialisation workshops – practical courses providing training in skills, methods or research tools and procedures related to specific disciplines of the School.
- Seminars – scientific seminars related to the disciplines of the School.
- Other scientific activities – activities that develop a researcher's skills, independent of the chosen discipline.
- Professional internships – classes developing research skills.

Classes are conducted in Polish or English. In the absence of English-speaking people, classes may be conducted in Polish. Classes may be held in a hybrid form using teleinformatic platforms.

§4

1. The basic list of courses organized by the School and ECTS points is included in Annex 1 to the Programme of Studies

2. Periodic extensions of the list referred to in paragraph 1 are posted on the School's website no later than 7 days before the start of the relevant semester.

3. To pass the course, the doctoral student must attend at least 80% of the courses.

4. Some courses may be held during summer/winter school.

5. The Doctoral School Council may specify the minimum number of registered students necessary to conduct a given course.

§5

1. During the 4 years of study at the School, a doctoral student is required to accumulate at least 33 ECTS points, including at least 6 ECTS points obtained in total for completing elective courses and at least 10 ECTS points obtained in total for other scientific activities and professional internships offered by the School.

2. Detailed requirements regarding the selection of classes referred to in paragraph 1 are included in Annex No. 2.

§6

The Director/Head of the Doctoral School may, at the request of the doctoral student supported by the supervisor, count ECTS points previously obtained by the doctoral student and ECTS points awarded for the completion of subjects related to his/her research topic and/or participation in summer schools; carried out in other scientific units.

§7

In special cases, PhD students who carry out research work within the framework of European Union projects, e.g. MSCA Doctoral Network or MSCA Joint Doctorates and others related to the education of PhD students, may carry out an individual training program (IPR) consistent with the assumptions of a given project and the program of the Doctoral School. The individual training program should be submitted/presented to the Director/Head of the unit conducting the training no later than 30 days after the start of training, and approved by the Scientific Council of the Unit Conducting the training no later than 6 months after the start of training.

§8

The Director of the Doctoral School/Head of the Managing Unit may:

1. consent to the doctoral student's participation in classes conducted at another university, including a foreign one, or in classes conducted by visiting lecturers from units co-running the Doctoral School. The maximum number of points obtained by the doctoral student during the period of education is no more than 4 ECTS,
2. exempt the doctoral student from participating in the summer/winter school, provided that the doctoral student is required to participate in at least one summer/winter school during the first 2 years of education.

§9

Doctoral education may be conducted with a foreign entity with which the Managing Entity has concluded an agreement on joint doctoral education.

§10

Any doubts of interpretation arising in connection with this education programme or issues not regulated herein shall be decided by the Doctoral School Council.

§11

This training program enters into force on October 1, 2025.

Chairwoman of the Scientific Council

Prof. Urszula Gawlik, Ph.D.

Annex No. 1

To the education program

at the Interdisciplinary Doctoral School of Agricultural Sciences

1. **Mandatory subjects:**

1.1. Major subject(s) related to the scientific discipline(s) - 30 hrs / 2 ECTS

1.2. Statistical methods in scientific research – 30 hrs / 2 ECTS

1.3. Ethical and legal aspects in scientific research – 5 hrs / 1 ECTS

1.4. Specialized workshops in a selected foreign language – 30 hrs / 2 ECTS

1.5. Fundraising for research and project preparation – 15 hrs / 2 ECTS

1.6. Preparation and editing of a scientific text – 15 hrs / 2 ECTS

1.7. Copyright and Intellectual Property – 5 hrs/1 ECTS

2. Optional subjects (workshops)*

2.1. Molecular biology techniques – 15 hrs / 2 ECTS

2.2. Food Chain Safety – 15 hrs / 2 ECTS

2.3. Microbiology – 15 hrs / 2 ECTS

2.4. Advanced methods of proteome analysis – 10 hrs / 2 ECTS

2.5. Advanced methods of metabolome analysis – 10 hrs / 2 ECTS

2.6. Sensory analysis of food – 12 hrs / 2 ECTS

2.7. *In vitro* techniques – 15 hrs / 2 ECTS

2.8. Imaging of cells and tissues – 15 hours / 2 ECTS

2.9. Physical methods in food research – 15 hrs / 2ECTS

2.10. Food safety and quality – 10 hrs / 2 ECTS

2.11. Selected issues in bioeconomics – 10 hrs / 2 ECTS

2.12. Transfer of knowledge and technology – 5 hrs / 1 ECTS

2.13. Epigenetics – 15 hrs / 2 ECTS

2.14. Nutrigenomics – 15 hours /2 ECTS

2.15. disciplinary lecture – 5 hrs / 1 ECTS

2.16. non-disciplinary lecture – 5 hours /1 ECTS

A doctoral student may choose to take classes in any unit that makes up the doctoral school.

3. Doctoral seminar – 60 hrs / 4 ECTS

4. Other scientific activities

4.1. Conducting your own research project/grant – 2 ECTS per project; maximum 4 ECTS for the entire period of study

4.2. Research internship abroad – 2 ECTS for the internship; maximum 4 ECTS for the entire period of education

4.3. Participation in a research/commercialization/implementation project – 2 ECTS ; maximum 2 ECTS during the entire period of education

4.4. Presentation at a scientific conference – 1 ECTS per presentation, maximum 3 ECTS
for the entire period of education

4.5. Authorship of a scientific publication from the current list of the Ministry of Science and Higher Education – 4 ECTS for publications; maximum 8 ECTS for the entire period of education

4.6. Activities promoting learning – 1 ECTS per activity; maximum 3 ECTS for the entire period of education

5. Professional internships – 1 ECTS for at least 10 hours of internship, maximum 1 ECTS
for the entire period of education.

Annex No. 2

To the education program

at the Interdisciplinary Doctoral School of Agricultural Sciences

Detailed requirements for classes referred to in §5 section 2 of the education program. The list of subjects for individual disciplines can be found in Annexes 3, 4, 5 to the education program.

A. Obligatory courses

A minimum of 12 ECTS points must be obtained during the first two years of study at the Doctoral School by passing exams/credits in the subjects listed in Annex No. 1, item 1 to the education program. In justified cases, the Director/Head of the School may consent to the implementation of part of the lectures at a different time:

B. Elective courses

It is necessary to obtain at least 6 ECTS points during the three years of study at the Doctoral School by completing selected subjects from the group of elective courses offered in a given discipline. Courses may be organized by individual conducting Units or during the summer/winter school. An updated list of available trainings, together with the ECTS points and an indication of the entity responsible for the courses, is available on the School's website.

C. Seminars

Participation in seminars and lectures organized by the Managing Units is obligatory. Each PhD student is obliged to present the results of their work at the doctoral school forum during the summer/winter school in the first or second year of education.

D. Other scientific activities

You must obtain a minimum of 10 ECTS points by demonstrating your activity in selected activities.

E. Professional internships

Internships in laboratories of the institutes that make up the School or other scientific units. Classes in which the doctoral student expands their knowledge and skills to plan and conduct research work. In special cases, with the consent of the director/head of the school, internships may take place in another scientific and research unit.

Annex No. 3

To the education program

at the Interdisciplinary Doctoral School of Agricultural Sciences

Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences in Olsztyn

Disciplines: 1) animal science and fisheries; 2) food and nutrition technology

Item	Number of hours	ECTS points	Year	Form of crediting	Learning outcomes [1]
1. Mandatory subjects					
1.1. Major: **1.1.1.** related to the discipline of animal science and fisheries **1.1.2.** related to the discipline of nutrition and food technology	30	2	I/II	Exam	W01, W02, W03, W04, U03, K01, K03
1.2. Statistical methods in scientific research	30	2	I/II	Exam	W06, U06, K02, K03, K04, K05
1.3. Ethical and legal aspects in scientific research	5	1	I/II	Passing	W08, U06, K05, K06, K07
1.4. Specialized workshops in a selected foreign language	30	2	1st/2nd year	Exam	W05, U04, U05, K03, K02, K04
1.5. Fundraising for research and project preparation	15	2	1st/2nd year	Pass with grade	W07, U01, U05, K02, K03, K05, K06
1.6. Preparation and editing of a scientific text	15	2	I/II	Pass with grade	W04, W05, U01, U04, U06, K02, K03, K04, K05
1.7. Copyright and Intellectual Property	5	1	I/II	Pass with grade	W08, U01, K01, K02, K03, K04, K05, K06
2. Optional Subjects					
2.1. Molecular biology techniques	15	2	I/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.2. Microbiology	15	2	II/III	Pass with	W02, W03,

				grade	U01, U02, U03, K02, K03, K04, K05, K08
2.3. Proteome Analysis Methods	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.4. Advanced methods of metabolome analysis	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.5. Sensory analysis of food	12	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.6. Techniques *in in vitro*	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.7. Cell and tissue imaging	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.8. Transfer of knowledge and technology	5	1	II/III	Pass with grade	W08, U01, K03, K04, K05, K07
2.9. Epigenetics	15	2	I/IV	Passing	W01,W02, U03, K01, K03
2.10. Nutrigenomics	15	2	I/IV	Passing	W01,W02, U03, K01, K03
2.11. disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
2.12. extra-disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
3. **Seminar**	60	4	I/IV	Passing	W01, W02, W03, U01,

					U03, U04, U06
4. Other scientific activities					
4.1. Conducting your own research project/grant	2 ECTS/project	4	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
4.2. Research internship abroad	2 ECTS/internship	4	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K04 , K05, K06,K07
4.3. Participation in a research/commercialization /implementation project	design	2	I/IV	Passing	W01, W02, W03, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07,K08
4.4. Presentation at a scientific conference	1ECTS/ conference	3	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K05,
4.5. Authorship of a scientific publication from the current list of the Ministry of Science and Higher Education	4 ECTS/publication	8	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03,

					K04, K05, K06, K07, K08, K09
4.6. Activities promoting science	1 ECTS/activity	3	I/IV	Passing	W01, W02, W04, W05, W08, U01, U04, K01, K02, K05, K06, K08
5. Professional practice	10	1	I/IV	Passing	W01, W02, W03, W05, W08,W09 U01, U02, U03, K01, K03, K06, K07, K09

[1)] Learning outcomes achieved as a result of completing a given subject. A detailed description of the outcomes marked with symbols can be found in *Annex 6 to the Education Program.*

Annex No. 4

To the education program

at the Interdisciplinary Doctoral School of Agricultural Sciences

National Veterinary Institute - National Research Institute in Puławy Discipline: veterinary medicine

Item	Number of hours	ECTS points	Year	Form of crediting	Learning outcomes [1]
1. Mandatory subjects					
1.1. A major subject related to the discipline of veterinary science	30	2	I/II-	Exam	W01, W02, W03, W04, U03, K01, K03
1.2. Statistical methods in scientific research	30	2	I/II	Exam	W06, U06, K02, K03, K04, K05
1.3. Ethical and legal aspects in scientific research	5	1	I/II	Pass with grade	W08, U06, K05, K06, K07, K08
1.4. Specialized workshops in a selected foreign language	30	2	1st/2nd year	Exam	W05, U04, U05, K03, K02, K04
1.5. Fundraising for research and project preparation	15	2	1st/2nd year	Pass with grade	W07, U01, U05, K02, K03, K05, K06
1.6. Preparation and editing of a scientific text	15	2	I/II	Pass with grade	W04, W05, U01, U04, U06, K02, K03, K04, K05
1.7. Copyright and Intellectual Property	5	1	I/II	Pass with grade	W08, U01, K01, K02, K03, K04, K05, K06,K07
2. Optional Subjects					
2.1. Molecular biology techniques	15	2	I/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.2. Food Safety	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.3. Proteome Analysis Methods	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.4. In vitro techniques	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.5. Alternative methods to animal testing used in toxicology.	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.6. Transfer of knowledge and technology	5	1	II/III	Pass with grade	W02, W03, U01, U02, U03, K02,

					K03, K04, K05, K09
2.7. disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
2.8. extra-disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
3. Seminar	60	4	I/IV	Passing	W08, U01, K03, K04, K05, K08
4. Other scientific activities					
4.1. Conducting your own research project/grant	2 ECTS/ project	4	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
4.2. Research internship abroad	2 ECTS/internship	4	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K04, K05, K06,K07
4.3. Participation in a research/commercialization /implementation project	2 ECTS/project	2	I/IV	Passing	W01, W02, W03, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07,K08
4.4. Participation in a scientific conference	1ECTS/ conference	3	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K05,
4.5. Authorship of a scientific publication from the current list of the Ministry of Science and Higher Education	4 ECTS/publication	8	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
4.6. Activities promoting science	1 ECTS/activity	3	I/IV	Passing	W01, W02, W04, W05, W08, U01, U04, K01, K02, K05, K06, K08
5. Professional practice	10	1	I/IV	passing	W01, W02, W03, W05, W08,W09 U01, U02, U03, K01, K03, K06, K07, K09

[1)] Learning outcomes achieved as a result of completing a given subject. A detailed description of the outcomes marked with symbols can be found in *Annex 6 to the Education Program.*

Annex No. 5

To the education program

at the Interdisciplinary Doctoral School of Agricultural Sciences

Bohdan Dobrzański Institute of Agrophysics of the Polish Academy of Sciences in Lublin

Discipline: Agriculture and Horticulture

Item	Number of hours	ECTS points	Year	Form of crediting	Learning outcomes [1]
1. Mandatory subjects					
1.1. A major subject related to the scientific discipline of agriculture and horticulture.	30	2	I/II	Exam	W01, W02, W03, W04, U03,
1.2. Statistical methods in scientific research	30	2	I/II	Exam	W06, U06, K02, K03, K04, K05
1.3. Ethical and legal aspects in scientific research	5	1	I/II	Pass with grade	W08, U06, K05, K06, K07, K08
1.4. Specialized workshops in a selected foreign language	30	2	1st/2nd year	Exam	W05, U04, U05, K03, K02, K04
1.5. Fundraising for research and project preparation	15	2	1st/2nd year	Pass with grade	W07, U01, U05, K02, K03, K05, K06
1.6. Preparation and editing of a scientific text	15	2	I/II	Pass with grade	W04, W05, U01, U04, U06, K02, K03, K04, K05
1.7. Copyright and Intellectual Property	5	1	I/II	Pass with grade	W08, U01, K01, K02, K03, K04, K05, K06,K07
2. Optional Subjects					
2.1. Physical Methods in Food Research	15	2	I/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.2. Cell and tissue imaging	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K08
2.3. Molecular biology techniques	15	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.4. Food safety and quality	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09
2.5. Selected issues in bioeconomy	10	2	II/III	Pass with grade	W02, W03, U01, U02, U03, K02, K03, K04, K05, K09

2.6. Transfer of knowledge and technology	5	1	II/III	Pass with grade	W08, U01, K03, K04, K05, K08
2.7. disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
2.8. extra-disciplinary lecture	5	1	I/IV	Passing	W01,W02, U03, K01, K03
3. Seminar	60	4	I/IV	Passing	W01, W02, W03, U01, U03, U04, U06
4. Other scientific activities					
4.1. Conducting your own research project/grant	2 ECTS /design	4	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
4.2. Research internship abroad	2 ECTS/internship	4	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K04, K05, K06,K07
4.3. Participation in a research/commercialization /implementation project	design	2	I/IV	Passing	W01, W02, W03, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07,K08
4.4. Presentation at a scientific conference	1 ECTS/ conference	3	I/IV	Passing	W01, W02, W03, W05, U01, U02, U03, U04, K01, K02, K03, K05,
4.5. Authorship of a scientific publication from the current list of the Ministry of Science and Higher Education	4 ECTS/publication	8	I/IV	Passing	W01, W02, W03, W04, W05, W06, W07, W08, U01, U02, U03, U04, U05, K01, K02, K03, K04, K05, K06, K07, K08, K09
4.6. Activities promoting science		3	I/IV	Passing	W01, W02, W04, W05, W08, U01, U04, K01, K02, K05, K06, K08
5. Professional practice	10	1	I/IV	Passing	W01, W02, W03, W05, W08,W09 U01, U02, U03, K01,

					K03, K06, K07, K09

[1)] Learning outcomes achieved as a result of completing a given subject. A detailed description of the outcomes marked with symbols can be found in *Annex 6 to the Education Program.*

Annex No. 6

To the curriculum and learning outcomes
at the Interdisciplinary Doctoral School of Agricultural Sciences

LEARNING OUTCOMES IN INTERDISCIPLINARY DOCTORAL SCHOOL OF AGRICULTURAL SCIENCES

The implementation of the Interdisciplinary Doctoral School of Agricultural Sciences program prepares for work in a scientific and research capacity in the following disciplines: animal science and fisheries, nutrition and food technology, veterinary science and agriculture and horticulture, by achieving learning outcomes assigned to level 8 of the Polish Qualifications Framework (based on art. 7 sec. 3 of the Act of 22 December 2015 on the Integrated Qualifications System) in the scope of:

1. General knowledge in the disciplines of animal science and fisheries, nutrition and food technology, veterinary science and agriculture and horticulture;
2. Advanced level knowledge, of a detailed nature, corresponding to the area of scientific research conducted in a given discipline or interdisciplinary research
3. Skills related to the methodology of conducting scientific research in a given scientific discipline;
4. Social competences relating to scientific research activities and the social role of a scientist.

Table of assumed learning outcomes at the Interdisciplinary Doctoral School of Agricultural Sciences in terms of knowledge (K), skills (U) and social competences (K)

LEARNING OUTCOMES	
Effect symbol	**Description of the learning outcome at level 8 of the Polish Qualifications Framework**
KNOWLEDGE	
W01	Has extensive knowledge of the discipline(s) in which the doctoral thesis is being carried out.
W02	Knows the global scientific achievements related to the discipline/disciplines in which the doctoral thesis is being carried out.
W03	Has detailed knowledge of the research techniques and research methodology used in the scientific discipline(s) in which the doctoral thesis is being carried out.
W04	Has knowledge about the possibilities of searching and obtaining reliable scientific information.
W05	Has detailed knowledge of specialist vocabulary within the research topics covered in his/her native language and English.
W06	Has in-depth knowledge of statistical data analysis methods and statistical tools used in the analysis of own research results.

W07	Has knowledge about obtaining funds for conducting scientific research and knows the principles of implementing research projects.
W08	Knows the principles of ethics relating to the reliability of scientific research, publication of research results and transfer of knowledge to the economy.
W09	Has knowledge of safety rules in the workplace.
SKILLS	
U01	Is able to formulate research problems and indicate research methods that enable their solution.
U02	He has excellent knowledge of research techniques used within the scope of the research topics he pursues.
U03	Is able to obtain reliable scientific information and assess the significance of the latest scientific reports in the field of agricultural/veterinary sciences, in particular in the scientific discipline/disciplines in which the doctoral thesis is being carried out.
U04	Is able to present the results of research work in the form of a scientific publication or scientific report, subject them to critical analysis and discussion in Polish and English.
U05	Is able to properly prepare an application for research funding from internal and external sources.
U06	Is able to prepare a doctoral dissertation under the supervision of a supervisor or a supervisor and an auxiliary supervisor and present its main assumptions during the public defense.
SOCIAL COMPETENCES	
K01	He is ready to play the role of a scientist and researcher in the field of agricultural sciences, serving the good of society and improving the quality of life.
K02	Is able to think and act in a creative and entrepreneurial manner, create new ideas and seek innovative solutions and is aware of responsibility for the consequences of his/her actions and decisions.
K03	Understands the obligation to constantly expand knowledge and improve his/her research skills, is ready to critically evaluate scientific achievements in the area of his/her own research and his/her own contribution to the development of the discipline/disciplines in which the doctoral thesis is being carried out. Is ready to critically evaluate his/her own limitations and understands the need for consultation and exchange of experiences in the scientific community.
K04	Understands the principles of creative work in a research team in the process of conducting scientific research, developing results and creating scientific publications.
K05	Understands and adheres to the principles of scientific ethics and research and publication integrity.
K06	Applies ethical principles in scientific research and respects data confidentiality.

K07	Adheres to the principles of humane treatment of laboratory animals in scientific research and strictly follows the recommendations of the bodies supervising this research.
K08	Is ready to take ethical, legal and economic responsibility for spending funds obtained for scientific research in accordance with their intended purpose.
K09	Is responsible and able to take care of his/her own safety and that of his/her co-workers at work, and shapes patterns of proper conduct in the workplace.