A COURSE SYLLABUS – DOCTORAL SCHOOL
REGARDING THE QUALIFICATION CYCLE FROM 2022 TO 2026

GENERAL INFORMATION ABOUT THE COURSE	
Course title	**Doctoral seminar**
Name of the unit running the course	**Doctoral School at the University of Rzeszów**
Type of course *(obligatory, optional)*	obligatory
Year/semester of studies	year: I - IV, semester: I - VII
Discipline	Biological sciences
Language of course	Polish
Name of the course coordinator	Prof. dr hab. Andriy Sybirnyy
Name of the course lecturer	Prof. dr hab. Andriy Sybirnyy Dr hab. Justyna Ruchała, prof. UR
Prerequisites	Scope of knowledge resulting from the study programme in biological sciences, knowledge of English to the extent allowing the use of sources of scientific information, skills and competences at level 7 of the Polish Qualification Framework.

BRIEF DESCRIPTION OF COURSE
(100-200 words)

The aim of the doctoral seminar is to:

- to prepare the doctoral student to carry out scientific work in the subject of the doctoral project being carried out, which is achieved through the formation of skills and competences in:
- formulating the research problem and the resulting hypotheses;
- defining the scope of research, including through the selection selection of appropriate research methods, techniques and tools;
- research planning;
- analysis of the literature in the field of the dissertation, as well as its critical analysis;
- developing the dissertation;
- producing a scientific thesis, including respecting intellectual property rights;
- • preparing the doctoral student to present the results of his/her own research using modern information technology tools;
  • preparing the doctoral student to develop scientific projects and submit research grant proposals in relevant competitions.

LEARNING OUTCOMES FOR THE SUBJECT AND ASSESSMENT METHODS

Learning outcome	The description of the learning outcome defined for the course	Relation to the degree programme outcomes (symbol)	Learning Format (Lectures, classes,...)	Method of assessment of learning outcomes (e.g. test, oral exam, written exam, project,...)
Knowledge: Knows and understands				
EK_1	The theoretical underpinnings of the topic of the dissertation, understands the	P8S_WG1	seminar	Analysis of the literature on the subject of

	purpose of the topic being pursued and possible research directions in the field of biological sciences being pursued.			the doctoral dissertation.
EK_2	The latest developments in the subject of the dissertation, including techniques, methods and research tools used to achieve the research hypotheses.	P8S_WG2	seminar	Development of research methodology.
EK_3	Polish and English terminology used in the discipline of biological sciences, and understands the necessity of its continuous updating.	P8S_WG3	seminar	Preparation of an oral presentation.
Skills: Able to				
EK_4	Define the purpose of the research, as well as formulate hypotheses and, based on the results of their own research and through analysis of the scientific literature, correctly verify them.	P8S_UW1	seminar	Development of theoretical foundations as well as methodology of the doctoral thesis. Preparation of an oral presentation. Development of a scientific project.
EK_5	Based on the newest literature, demonstrate the purposefulness of their research in the topic of the dissertation and propose its implementation.	P8S_UW2	seminar	Development of an oral presentation. Development of a scientific project. Preparation of a manuscript of a scientific article.

EK_6	Critically analyse the results of their own research based on the available literature on the subject.	P8S_UW3	seminar	Development of an oral presentation. Development of a scientific project. Preparation of a manuscript of a scientific article.
EK_7	Able to communicate on specialised topics to a degree which enables them to actively participate in the international scientific and professional environment using a foreign language at the B2 ESKJ level.	P8S_UK6	seminar	Presentation of the prepared scientific presentation.
Social competence: Ready to				
EK_8	Critically analyse the research achievements obtained by other research groups in topics similar to those of the dissertation.	P8S_KK1	seminar	Development of an oral presentation. Preparation of a manuscript of a scientific article.
EK_9	Systematically update their knowledge by reading the latest scientific literature in the topic of the dissertation.	P8S_KK3	seminar	Development of an oral presentation. Preparation of a manuscript of a scientific article.

LEARNING FORMAT – NUMBER OF HOURS

Semester (no.)	Lectures	Seminars	Lab classes	Internships	Other	**ECTS**
I-VII	-	-	-	-	7 x 15 hrs. – 105 hrs.	**14**

METHODS OF INSTRUCTION

- multimedia presentation,
- work with text,
- analysis of research results,
- discussion,
- research project,

COURSE CONTENT

Programme content implemented throughout the training cycle:

1. Analysis of the available literature in the dissertation topic.
2. Definition of the research objective and hypotheses in the subject of the dissertation, including the overall research plan.
3. Planning the research methodology, as well as determining the techniques and tools through which it will be possible to achieve the objectives planned in the dissertation.
4. Analysis of own research results with discussion based on the results presented in the available recent scientific literature.
5. Procedures for dissemination of own research results - principles of scientific research integrity.
6. Review of available grant programmes - discussion of principles of preparing a scientific project.

COURSE ASSESSMENT CRITERIA

Pass mark for the course after each semester of teaching, applicable grading scale: 2.0, 3.0, 3.5, 4.0, 4.5, 5.0

I semester: Analysis of the scientific literature in the subject of the dissertation, definition of the subject, objectives and hypotheses of the dissertation.

II semester: Continuation of literature analysis, development of a detailed research plan, implementation of scientific research, analysis of own research results based on available scientific literature.

III semester: Continuation of literature analysis, implementation of scientific research, presentation of own research results at a scientific conference, preparation and submission of a research project.

IV semester: Continuation of literature analysis, implementation of scientific research, presentation of own research results at a scientific conference, preparation of a manuscript of a scientific article.

V semester: Preparation of a scientific manuscript in English.

VI semester: Presentation of own research - multimedia presentation together with scientific discussion in Polish and English.

VII semester: Final graphical and statistical processing of research results, attempted interpretation, preparation of dissertation.

TOTAL PhD STUDENT WORKLOAD REQUIRED TO ACHIEVE THE INTENDED LEARNING OUTCOMES – NUMBER OF HOURS AND ECTS CREDITS

Activity	Number of hours
Scheduled course contact hours	**7 x 15 hrs. – 105 hrs.**
Other contact hours involving the teacher (consultation hours, examinations)	20
Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.)	295
TOTAL NUMBER OF HOURS	**420**
TOTAL NUMBER OF ECTS CREDITS*	**14**

INSTRUCTIONAL MATERIALS	
Compulsory literature:	1. Databases of scientific publications
Complementary literature:	1. Databases of scientific publications

*(1 ECTS CREDIT CORRESPONDS TO 25 - 30 HOURS OF TOTAL WORKLOAD OF THE DOCTORAL STUDENT NEEDED TO ACHIEVE THE EXPECTED OUTCOMES)

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DATE AND SIGNATURE OF THE COURSE TUTOR

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APPROVAL OF THE HEAD OF THE UNIT OR AUTHORISED PERSON