# A COURSE SYLLABUS – DOCTORAL SCHOOL
# REGARDING THE QUALIFICATION CYCLE FROM 2024/2025 TO 2027/2028

| GENERAL ITEM INFORMATION | |
|---|---|
| Course title | **DOCTORAL WORKSHOP** |
| Name of the unit running the course | Doctoral School at the University of Rzeszów |
| Type of course *(obligatory, optional)* | compulsory subject |
| Year/semester of studies | years I–IV, semesters: I–VIII |
| Discipline | Medical sciences |
| Language of course | Polish/English |
| Name of the course coordinator | Prof. Adam Reich, MD, PhD |
| Name of the course lecturer | Prof. Adam Reich, MD, PhD.<br>Dr Oleksandr Korchynskyy |
| Prerequisites | Completed higher education or advanced education at the higher education level and confirmed scientific activity. Knowledge of English enabling fluent reading of scientific texts and conducting scientific discussions in this language. |

**BRIEF DESCRIPTION OF COURSE**
**(100-200 words)**

The aim of the Doctoral Workshop course is to prepare doctoral students to plan, compile the necessary documentation and carry out a research project that will form the basis for their doctoral thesis.
As part of the course, doctoral students will acquire knowledge, skills and social competences in the field of preparing a literature review thematically related to their planned scientific research. Next, research hypotheses will be formulated, on the basis of which doctoral students will prepare and carry out a research project. They will conduct pilot and proper scientific research, statistically and graphically process the obtained research results and analyse them based on their knowledge. They will compare their achievements with the available works of experts and make an objective assessment of their own scientific work.

**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** | | | |
| **P8S_WG1** | Possesses extensive, well-organised theoretical knowledge underpinned by laboratory work. Is familiar with current scientific achievements, including global ones, in the field of their own scientific interests, understands the importance of conducting scientific research and | P8S_WG | ~~Laboratories/~~ Seminar | report |

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| | has knowledge related to its perception in the scientific system in comparison with other disciplines. | | | |
| **P8S_WG2** | They have extensive knowledge focused on development and the latest discoveries in global scientific research in the discipline of medical sciences and related sciences, thematically related to the scientific research being conducted. | P8S_WG | ~~Laboratories/~~ Seminar | report |
| **P8S_WG3** | Knows and uses specialist terminology used in the discipline of medical sciences and related disciplines, thematically related to the scope of scientific research conducted in Polish and in a foreign language. | P8S_WG | ~~Laboratories/~~ Seminar | report |
| **P8S_WG4** | Knows issues related to the methodology of conducting scientific research in the chosen research topic in the discipline of medical sciences, knows the principles of planning and conducting scientific research using interdisciplinary methods and research tools. | P8S_WG | Laboratories/ ~~Seminar~~ | report |
| **Skills:** | **Able to** | | | |
| **P8S_UW1** | Based on their specialised knowledge, they are able to identify and solve research problems, define research objectives, formulate hypotheses and research topics, develop research techniques, methods and tools, and draw conclusions and make diagnoses based on the results of scientific research. | P8S_UW | Laboratories/ Seminar | report |
| **P8S_UW2** | They are able to select and use available scientific literature to properly identify and solve research problems related to the topic of their scientific research and to undertake innovative activities closely related to their scientific work, as well as to apply appropriate research methods to | P8S_UW | Laboratories/ ~~Seminar~~ | report |

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| | create new elements of scientific output. | | | |
| | The doctoral student is able to make an objective and critical analysis of the effects of published research activities, expert works and other scientific studies, and is able to stimulate critical sensitivity to the recognition of dilemmas when conducting their own scientific research. | P8S_UW | ~~Laboratories/~~ Seminar | report |
| **Social competence:** | **Ready to** | | | |
| **P8S_KK1** | He is prepared to express a critical opinion on scientific achievements within the chosen subject area in the discipline of medical sciences and to critically assess the contribution of his own research activities to the development of the discipline of medical sciences. | P8S_KK | Laboratories/ ~~Seminar~~ | report |

**LEARNING FORMAT – NUMBER OF HOURS**

| Semester (no.) | Lectures | Seminars | Laboratories/ Seminar | Internships | Other | **ECTS** |
|---|---|---|---|---|---|---|
| **I - VIII** | **-** | **8 x 15 hrs.- 120 hrs.** | **8 x 15 hrs.- 120 hrs.** | **-** | **-** | **24** |

**METHODS OF INSTRUCTION**

- traditional seminars and laboratories;
- classes with multimedia presentations;
- projects;
- discussions;
- interpretation of source texts;
- conducting experiments;
- conducting research.

**COURSE CONTENT**

Curriculum content covered in semesters I to VIII of the course: Doctoral workshop, form of classes: laboratories and seminars.

1. Discussion of the principles of reliability and specificity of conducting scientific research in the field of medical sciences.
2. Discussion and selection of available literature for the subject of research.
3. Development of a general research plan relevant to the completion of a doctoral dissertation based on previously formulated research hypotheses and research objectives (general and specific objectives).
4. Implementation of research methods, techniques and tools for the effective implementation of the developed general research plan as part of the doctoral dissertation.

5. Preparation of the necessary documentation to allow scientific research to be conducted.
6. Conducting a pilot study. Discussion of the results of the pilot study.
7. Conducting scientific research related to the topic of the doctoral dissertation.
8. Analysis and interpretation of the results obtained.
9. Preparation of manuscripts of scientific articles based on the research results obtained.
10. Work on the preparation of individual chapters of the doctoral dissertation.
11. Preparation of a shortened multimedia presentation of the doctoral dissertation.

**COURSE ASSESSMENT CRITERIA**

The doctoral student's work is assessed at every stage of the course in each semester and academic year in terms of: literature studied, knowledge expansion, research implementation, commitment and progress in the preparation of the doctoral thesis.
Possible semester grades are: 2.0, 3.0, 3.5, 4.0, 4.5, 5.0.
Percentage requirements for the grading scale:
- up to 50% - unsatisfactory (the doctoral student is not making progress in scientific research, is not expanding their knowledge, is not studying the literature, is not participating in substantive discussions, is not fulfilling their scientific obligations);
- 51% - 60% - satisfactory (the doctoral student makes negligible progress in scientific research, expands their knowledge, studies basic literature, the discussion is limited to a narrow range of substantive knowledge, fulfils basic scientific duties);
- 61% - 70% - satisfactory plus (the doctoral student makes progress in scientific research, expands their knowledge, studies basic literature, participates substantively in discussions, fulfils their scientific duties);
- 71% - 80% - good (the doctoral student makes significant progress in scientific research, expands their knowledge, studies basic and supplementary literature, participates substantively in discussions, fulfils all scientific duties);
- 81% - 90% - good plus (the doctoral student makes significant progress in scientific research, systematically expands their knowledge, studies basic and supplementary literature, participates substantively in discussions, fulfils all scientific duties);
- 91% - 100% - very good (the doctoral student makes significant progress in scientific research, systematically expands their knowledge, studies basic and supplementary literature as well as literature beyond the required scope, participates substantively in discussions, fulfils all scientific obligations);

**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 | **8 x 30 hrs. - 240 hrs.** |
| Other contact hours involving the teacher (consultation hours, examinations) | **10 hrs.** |
| Non-contact hours – student`s own work (preparation for classes or examinations, project, etc.) | **470 hrs.** |
| **TOTAL NUMBER OF HOURS** | **720 hrs.** |

| TOTAL NUMBER OF ECTS CREDITS* | 24 |
|---|---|
| **INSTRUCTIONAL MATERIALS** | |
| Compulsory literature: | Medical databases (PubMed, Scopus, Web of Science) |
| Complementary literature: | Literature related to the topic of the doctoral thesis |

*(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