

Instructions for the Preparation of the Individual Research Plan (IRP)

effective from academic year 2024/2025

The Individual Research Plan (IRP) is the primary document that defines the topic of the doctoral dissertation and the method of its implementation throughout the period of education at the Doctoral School until the dissertation is submitted to the relevant Discipline Board.

During their studies at the Doctoral School, the PhD student is required to submit an annual report on the progress made in implementing their IRP. In particular, they must demonstrate an appropriate level of advancement in their research work, in line with the IRP, during the mid-term assessment, which takes place halfway through the doctoral education period, at the end of the second year of study. The outcome of this assessment determines whether the PhD student is allowed to continue their education at the Doctoral School. *A negative assessment results in removal from the list of PhD students.*

Version of IRP

- Submitted
- Amendment 1
- Amendment 2
- Amendment ...

1. Background information

Research topic

'.....'

The research topic should be precisely defined.

| | | |
|--|------------------------------|-----------------------------|
| PhD student's full name: | | |
| Supervisor/Supervisors or Supervisor/Auxiliary Supervisor <input type="checkbox"/> YES (add opinion as attachment) | | |
| Unit of implementation of the PhD student's research project: | | |
| Industrial doctorate (tick as appropriate) | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| PhD dissertation discipline | | |

| | |
|---|--|
| Date of commencement of education at the Doctoral School (day/month/year): | |
| Planned date of submission of PhD dissertation (day/month/year): | |

The unit responsible for project implementation is the Department/Clinic/Institute/Laboratory where the research project is conducted. Typically, this is the unit where the supervisor of the PhD dissertation is employed.

The start date of education at the Doctoral School is the day of the oath-taking ceremony.

PhD students generally take the oath on 1 October of the year of admission to the Doctoral School. Exceptions to this are those starting their education from the summer semester (this situation may apply, for example, to foreigners), who take the oath at the time of entering the Doctoral School.

If an industrial doctorate is being pursued, please tick YES in the "Industrial doctorate" line. In all other cases, please tick NO.

The recommended deadline for submission of the PhD dissertation is the last day of the final semester of the education programme. For the 2024/2025 cycle, this will be 30.09.2028.

2. Hypothesis and purpose of the research (maximum 100 words):

3. Justification for the research, with a specific indication of the project's innovative elements (maximum 100 words):

4. Method of research task implementation (A brief description of materials [e.g., research groups and their sizes, timeframe, geographical scope, databases used] and the methodology planned for the project) (maximum 300 words):

It is important to remember that the IRP concerns the PhD student's involvement in the project. If the PhD dissertation project is part of a larger project conducted within a research unit involving multiple researchers, statements such as "the research team will do..." should be strictly avoided. This is the PhD student's IRP, and the completed form should describe what the PhD student will do. Therefore, one should not blindly copy sections from research project applications that include the PhD student's project as a part.

If the PhD student's project is part of a larger whole, this section should not describe the implementation of the entire project. Instead, it should focus on the PhD student's specific research tasks.

However, it is necessary to mention that the project is part of a larger research initiative and indicate whether ethical committee approval has been obtained, if applicable.

Specify the nature of the planned research project with the following points in mind.

1. Type of research planned
 - a. Prospective
 - b. Retrospective
 - c. Experimental
2. Is the study conducted with the participation of humans, animals, or genetically modified organisms and microorganisms?
3. What is the nature of the project?
 - a. Basic research
 - b. Medical experiment or clinical study:
 - Therapeutic
 - Research-based
 - Biological material study
4. Does the project involve research with human participants or the use of personal data that is not a medical experiment, such as:
 - a. Observational study
 - b. Survey study
 - c. Retrospective analysis of data/medical records

The characteristics of the study population should be defined taking into account the following points:

1. Location of the research project and timeframe
2. Inclusion criteria for the study
3. Estimated sample size

A general outline of the research methods used to conduct the project should be provided. This includes, but is not limited to: the type of medical intervention, a description of the diagnostic tests performed, the scope of analytical studies on biological material, planned survey studies, the scope of medical records analysis.

Additionally, the criteria for evaluating research results should be described.

- 5. Expected final outcomes from the IRP (maximum 200 words) - the expected outcomes should align with the research tasks planned in the schedule and enable the preparation of the PhD dissertation in accordance with the current recommendations of the relevant Discipline Board:**

As final outcomes, publications are recommended, which will ultimately form a publication cycle enabling the submission of the PhD dissertation. It is necessary to specify the type of planned publications (e.g., review article, original research, case report), their anticipated thematic scope, and the approximate submission date to the journal's editorial board (month/year).

- 6. A research schedule with a breakdown of tasks related to the research project, including: research activities related to the project, grant applications and funding opportunities, training programmes and research internships, dissemination of results (publications and conference presentations), patent applications:**

| Year of education/academic year | Planned research tasks for implementation (please enumerate) | Expected outcome |
|---------------------------------|--|------------------|
| I 24/25 | 1. 2. 3. | |
| II 25/26 | 4. 5. 6. 7. | |
| III 26/27 | 8. | |
| IV | | |

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| 27/28 | | |
| ... | | |
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The establishment of a task schedule necessary for the implementation of the research project is a central element in the IRP preparation. The PhD student is required to submit annual progress reports based on the execution of the planned schedule: after the first year of education, after the second year—in connection with the mid-term assessment, after the third and the fourth year, and—in the case of any extension of education—within the deadlines specified in the approval for extension.

The tasks should be scheduled to ensure completion and submission of the PhD dissertation by the end of the fourth year of study at the Doctoral School.

The tasks include the following categories:

- 1) Strictly research-related tasks (specific to the PhD dissertation topic), such as preparation of an application to a research ethics committee or a bioethics committee, patient recruitment, initial and follow-up visits, database preparation, development of specific laboratory methods, preparation of required questionnaires, etc.
- 2) Tasks related to the preparation of the PhD dissertation., i.e. the preparation, submission to the editor, and publication of the articles which will form the publication cycle of the PhD dissertation.
- 3) Training-oriented tasks supporting the IRP implementation (beyond the Doctoral School's standard education programme), such as: methodological courses and training in techniques and methods necessary for the IRP implementation, as well as the submission of an application to obtain funding for a research project thematically related to the IRP (only as a principal investigator), the preparation of a patent application related to the research topic, a research internship in a foreign unit (or equivalent in a national unit), presentation of research results at national and/or international academic conferences directly related to the research topic.

The schedule should be realistic within the expected timeframe. Great attention must therefore be paid to the proper timing of planned tasks. During the mid-term assessment, the PhD student must demonstrate a sufficiently advanced level of research progress. The assessment committee must have grounds to issue a positive assessment, allowing for the continuation of research and study at the Doctoral School. A negative mid-term assessment results in removal from the list of PhD students. Therefore, it is strongly discouraged to concentrate a large number of time- and labor-intensive tasks—especially those related to publications forming the PhD dissertation—in the final year.

When planning research tasks, it is essential to ensure that their implementation is reflected in specific, measurable outcomes. An outcome may include a publication, a conference

presentation, obtained patent, training certificate, approval for conducting research, awarded funding, etc. Each outcome must be properly documented, particularly through official documents that will serve as proof of task completion, attached to the Report on the Implementation of the IRP.

Therefore, **when reporting IRP progress, each task must be accompanied by supporting evidence confirming its completion or the degree of progress made.** A PhD student's self-declaration in the form of a percentage estimate of task completion in the report's table is not sufficient. When defining research tasks, it is crucial to remember the mandatory requirement to provide documented proof of their execution.

It is permissible for multiple research tasks, conducted either simultaneously or sequentially, to lead to a common outcome.

Example: A PhD student plans the following research tasks for a specific year: 1. Conducting measurements, 2. Creating a database, 3. Preliminary data analysis, 4. Preparing a manuscript. The common outcome for these tasks is the manuscript of the publication related to the study, which should be attached to the IRP progress report for that year. However, if the PhD student is unable to complete the final task (manuscript preparation) for any reason, they must instead submit a report on the preliminary data analysis. If the preliminary analysis is also incomplete, the description of the created database must be provided as supporting documentation in the annual report.

When preparing the research schedule, the planned tasks should be numbered consecutively across all years. If five tasks are planned for the first year, numbered 1 to 5, then in the second year, numbering should start from Task 6 and continue sequentially.

Please note that if the implementation of a research topic requires the approval of the relevant research ethics committee, ethics committee on animal experiments, or bioethics committee, the submission of an application for approval should be among the tasks planned for the first year. If the research topic is part of a larger project that already has ethical approval from the relevant committee, there is no need to apply for approval again. However, the PhD student must declare this in Section 4 of the IRP and attach a statement from the principal investigator confirming that the PhD student's research topic falls under the existing approval in the IRP progress report after the first year. If the research does not require approval from an ethics committee, the PhD supervisor must provide a relevant statement confirming this, which should be included in the Individual Research Plan (IRP).

It is recommended to plan the PhD dissertation in the form of a publication cycle.

When planning publications, it is important to consider the publishing process timeline—the period from manuscript submission to a journal's editorial board to receiving confirmation of acceptance for publication. This process can take several months to over a year. Additionally, the possibility of manuscript rejection and the need to resubmit to another journal should be factored into the schedule.

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 Date and PhD student's signature

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 Signature of the supervisor(s)

Opinion of the auxiliary supervisor (if appointed) on the submitted IRP - *as an attachment*

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The opinion of the auxiliary supervisor should focus on the methodological aspects and the IRP feasibility within the expected timeframe, rather than on the PhD student as a person.

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 Signature of the auxiliary supervisor

Recommended planning in the IRP:

First year of study

- Preparation of the manuscript for the first publication (review or original article) that meets the criteria for inclusion in the PhD dissertation.

Second year of study

- Publication of one article (review or original), fulfilling the criteria for inclusion in the PhD dissertation.

Recommended planning in the IRP before the mid-term assessment - PhD student should complete at least:

- Two activities from Group A, or
- One activity from Group A and one activity from Group B, or
- Three activities from Group B

Group A activities:

- 1) Publication (or accepted for publication) of an original research paper as the first author in a journal listed in the Ministry of Science and Higher Education database, based on data obtained during the research project. The publication must meet the criteria for inclusion in the PhD dissertation.
- 2) Publication (or accepted for publication) of a perspective or review article as the first author in a journal listed in the Ministry of Science and Higher Education database, directly related to the topic of the Individual Research Plan (IRP). The publication must meet the criteria for inclusion in the PhD dissertation.
- 3) Preparation of a patent application or obtaining a patent related to the research topic outlined in the IRP.

Group B activities:

- 1) Completion of methodological courses (including statistics or ethics) related to the research methods planned in the Individual Research Plan (IRP).
- 2) Completion of training in research techniques and methods necessary for the implementation of the IRP, in the form of at least a 5-day research internship (or an equivalent duration) outside the main research institution.

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- 3) Completion of a research internship at a foreign institution (or an equivalent internship at a national institution).
- 4) Securing or attempting to secure funding for a research project thematically related to the IRP—only as the principal investigator—from either external or internal funding sources.
- 5) Presentation of research findings at a national or international scientific conference, directly related to the research topic covered in the IRP.
- 6) Publication (or acceptance for publication) of a clinical case report as the first author, meeting the criteria for inclusion in the PhD dissertation.