

**Recommendations regarding the form of developing a doctoral dissertation based on a cycle
published and thematically related scientific articles**

In the case of developing a doctoral dissertation in the form of a collection of published and related regarding the topics of scientific articles, it is recommended that the doctoral dissertation contain the following elements:

1. **summary of the work in Polish and English** (referring to the entire set of published works and thematically related scientific articles that provide an original solution to the scientific problem; the summary should not be identical to the summaries of individual articles constituting the publication cycle);

2. **table of contents**;

3. **list of abbreviations with explanations** (optional; if available in the case of a given dissertation justified);

4. **introduction**, including:

- presentation of the research problem and its significance (motivation), including an overview subject literature, but it is permissible for it to be implemented in the form of review publication (the length of this chapter should depend on the specificity of the dissertation and the degree of development of the literature review in the individual publications included in the cycle);
- reference to the current state of knowledge and research gaps,
- research questions, theses, hypotheses or research objectives;

5. **structure of the work** (explaining which elements of the research process are included in the scientific article);

6. **description of the original solution to a scientific problem**, with particular emphasis on:

- justification and a brief describing of the thematic connection of the publication cycle,
- explaining the results obtained (integrally) and embedding them in the current state of knowledge,
- explanation of how the research conducted provides an **original** solution of scientific problem,
- indication of limitations, prospects and possibilities of implementation/commercialization of the developed solutions;
- conclusions;

8. **lists of literature and appendices** (not applicable to elements that use only in publications included in the cycle); optionally, list of tables and figures;

9. **copies of scientific articles with statements** specifying individual contributions of doctoral student, presented in a descriptive form, in accordance with Annex 3 to Senate resolution no 31/2023.