

**Instruction for Ph.D. Candidates
on preparing
a Ph.D. dissertation
(in economics-related sciences)**

What needs to be done over the period of doctoral studies

A Ph.D. candidate is required to complete an individual postgraduate work plan, namely:

- to pass the candidate examination in the major discipline;
- to pass the examination in the general education program of a higher education institution (if Ph.D. candidate's university education does not correspond to the scientific area of the dissertation);
- to perform scientific research in accordance with the theme of the dissertation;
- to publish at least three articles in scientific journals of the Republic of Belarus included in the list for publication of the dissertation research findings (the list is approved by the Higher Attestation Commission of the Republic of Belarus) and (or) foreign scientific journals;
- to make scholarly reports at least at two scholarly, scholarly and practical conferences (the fact is confirmed by the programs of such conferences, their materials or abstracts of reports published);¹
- to pass current attestation at the department and at the meeting of the attestation commission every six months (A Ph.D. candidate presents a report on the dissertation findings within the reporting period. In case of non-attestation, a Ph.D. candidate is expelled due to the failure to implement the individual work plan);
- to summarize the materials of the research in the form of a dissertation;
- to pass the final attestation at the meeting of the state attestation commission (A Ph.D. candidate presents a report on the implementation of the individual work plan, including the main research findings and their significance, publications of the research findings and their practical use, the readiness of the dissertation for preliminary examination and public defense.

Upon successfully passing the final attestation, the scientific qualification "Researcher" shall be awarded and the researcher diploma shall be issued).

According to statistics, 3-7% of Ph.D. candidates in the Republic of Belarus defend their dissertations within postgraduate studies, and 20-25% of the candidates defend their dissertations within three years after graduating. This indicates that the process of writing and defending a dissertation is very time consuming. It requires great efforts and a high commitment from the candidate, which is a significant

¹ As a rule, a PhD candidate must publish more than 10 scientific papers, including scientific articles and conference materials. Textbooks, teaching aids and other educational literature are not regarded as scientific works. All scientific papers must be published prior to the initial dissertation review at the department where the research has been carried out.

difference between postgraduate education and other levels of education.

Procedure of Ph.D. Dissertation Defense

The council on dissertations defense awards a Ph.D. degree after a public defense. The final decision is approved by the Presidium of the Higher Attestation Commission of the Republic of Belarus (hereinafter – HAC).

The dissertation passes such stages of examination as:

- 1) initial review of the dissertation by the department where the research has been carried out;
- 2) preliminary examination by the educational institution (scientific meeting – scientific problem council);
- 3) examination by the dissertations defense council, including primary and (if necessary) additional examination, examination by official opponents and the opposing organization, public defense in the dissertations defense council;
- 4) final examination by the expert council of the HAC and the Presidium of the HAC.

The dissertation must be an **independently performed qualifying scientific work**, which has internal unity and testifies to the author's personal contribution to science, deal with solving a scientific problem or studying a selected scientific problem and contain:

- justified formulation of a scientific objective (problem);
- analytical review of the literature on the research topic, including the analysis of foreign sources of scientific information;
- defense statements (specific formulations of the distinctive features of independently obtained, new scientific results, characterizing the candidate's contribution to the scientific area of the dissertation, including a comparative assessment of their scientific and practical significance);
- description of the research materials and methods, a summary of the research findings and their analysis, as well as conclusions for each chapter;
- general conclusions on the dissertation as a whole with a brief description of the main scientific findings, their novelty and significance;
- recommendations on the application of the research findings;
- list of sources used;²
- list of the author's publications, reflecting the main research findings.

The dissertation shall be submitted to the defense board in the form of a specially prepared text. The title of the dissertation should reflect the aim of the research and correspond to its content.

² Usually, the number of references to the dissertation sources is more than 150. It is advisable to avoid references to the Internet sources and educational literature, and to refer mainly to scientific works.

An Author's Abstract is prepared in accordance with the materials of the dissertation, and it should reflect its content, defense statements, general conclusions on the dissertation as a whole and recommendations on the use of its results.³

In case of defending a dissertation in English, foreign citizens should print its text in English; and the author's abstract in English and one of the official languages of the Republic of Belarus.

A Ph.D. candidate should give references to the authors and sources for the dissertation, including other dissertations, the materials of which he or she uses. The references to one's own publications should also be provided in the text of the dissertation.

A Ph.D. candidate should indicate in the dissertation and the abstract that he or she has used the research findings obtained together with co-authors and other scholars.

A foreign citizen covers the costs of the defense and examination of the dissertation, including the costs of the simultaneous interpretation of his or her speeches, speeches by the opponents and other participants in the discussion, other materials and speeches related to the examination of the dissertation at all its stages.

1) *The initial examination of the dissertation at the department* is carried out after the order of the head of the department based on the Ph.D. candidate's application. **The application attachments are:**

- texts of the dissertation and the author's abstract;
- copies of publications on the dissertation topic;
- copies of certificates of passing candidate examinations and tests;
- supervisor's feedback.

2) *The preliminary examination of the dissertation* is carried out based on the Ph.D. candidate's application addressed to the head of the educational institution. The application attachments are:

- documents on higher education and certificates of passing candidate examinations and tests;
- texts of the dissertation and the author's abstract;
- originals or copies of publications on the dissertation topic;
- materials (if available) confirming the accuracy, scientific and practical significance, economic and social value of the dissertation results (acts and certificates of implementation, etc.).

Upon the Ph.D. candidate's application, the head of the educational institution commissions to conduct a preliminary dissertation examination at the scientific meeting and approves a council of three or more specialists (experts) to analyze the documents submitted by a Ph.D. candidate.

Before the final scientific meeting, a Ph.D. candidate must pass an anti-

³ The candidate starts to write Author's Abstract after the whole dissertation is ready. It is not permitted to include those materials into the Author's Abstract, which are not a part of the dissertation.

plagiarism dissertation test.

After listening to the Ph.D. candidate's report and council's conclusions, the scientific council makes a decision regarding the dissertation.

3) *The dissertation defense* is carried out by the dissertations defense council. The dissertations defense council accepts the dissertation for review upon the Ph.D. candidate's written application with such attachments as:

1. Ph.D. candidate's application with the dissertation title, major and scientific area of the dissertation.

2. Personal data sheet with a photo (2 copies).

3. Certified copies of the diploma of higher education.

4. Originals of certificates of passing candidate examinations and test.

5. Dissertation (5 copies).

6. Certificates and acts of implementation, other documents showing the practical use of the dissertation results (if available).

7. Text of the Author's Abstract.

8. Results of the preliminary examination (2 copies).

9. Research supervisor's opinion.

10. Originals or copies of the works indicated in the Author's Abstract, where the main research findings are published, as well as the programs of scientific congresses, conferences, symposia, confirming Ph.D. candidate's participation in them.

11. Two postcards with postage stamps: one – with the Ph.D. candidate's mailing address, and the other one – with the address of the dissertations defense council, where the dissertation is defended.

12. The copies of the passport pages containing the Ph.D. candidate's personal data (with the notarized translation into one of the official languages of the Republic of Belarus – for a foreign citizen) (2 copies).

Corrections in the dissertation and the Author's Abstract after their submission to the dissertations defense council shall not be permitted, except for the title of the dissertation.

The Chairman of the dissertations defense council commissions one of the council members to conduct a preliminary dissertation examination, author's abstract, Ph.D. candidate's publications, materials confirming authenticity and validity of the dissertation and its conclusions. Based on the submitted materials and the expert's written recommendation (the result of the initial examination), the dissertations defense council decides on the acceptance of the dissertation for the defense.

After accepting the dissertation for defense, the dissertations defense council appoints official opponents and the opposing organization, the dissertation defense date, as well as gives permission to publish and distribute the author's abstract. Two official opponents are appointed for the Ph.D. candidate's dissertation – experts in the scientific area of the dissertation, the fact of which is confirmed by their publications (at least three articles in the scientific journals of the Republic of Belarus for the dissertation findings publication; this list is

approved by the HAC).

The opposing organization is appointed from a number of organizations known for their achievements in the relevant field of science, where the specialists in the area of the dissertation have academic degrees.

Public dissertation defense is a scientific debate. In the course of the public dissertation defense, its scientific novelty and significance, economic and social value, reliability and validity of the results, defense statements, conclusions and recommendations of the dissertation, Ph.D. candidate's personal contribution to it are discussed.

The dissertation defense in English is carried out with the permission of the HAC.

4) When the dissertations defense council makes a positive decision regarding the dissertation, the Ph.D. candidate's attestation profile, a copy of the dissertation, five copies of the author's abstract and an electronic copy of the dissertation are sent to the HAC within a month for the examination by **the expert council of the HAC**, which makes a conclusion on the dissertation and a recommendation for the HAC's Presidium to award a degree.

The issues of awarding a Ph.D. degree are considered by the HAC within three months from the date of the HAC's receipt of all necessary materials.

When the HAC's Presidium makes a positive decision, a foreign citizen is issued a national diploma of Doctor of Philosophy (Ph.D.).

Dissertation Structure

The dissertation should be structured as follows:

- Title page;
- Section "Contents";
- Section "List of Abbreviations and (or) Symbols" (if necessary);
- Section "Introduction";
- Section "General Description of the Work"⁴;
- Main part, including an analytical review of the literature on the research theme;
- Section "Bibliographic List" or "References";
- Section "Supplement" (if necessary).

The volume of the dissertation should not exceed 200 pages of the text.⁵ An increase in the volume of the dissertations in the humanities by 15 percent is permitted. Illustrations, tables, as well as the sections "Bibliographic List" or "References" and "Supplement" are not included in the volume of the dissertation.

⁴ This section is very important; it is fully transferred to the Author's Abstract. As a rule, a research supervisor assists in its formulation.

⁵ 200 pages is the maximum size of the dissertation excluding illustrations and tables. The minimum volume is not regulated; however, it is not recommended to submit the dissertation of less than 120 pages for the defense.

The dissertation should be printed on one side of a sheet of white A4 paper (210 x 297 mm), Times New Roman (Times New Roman Cyr) in the usual type, font size – 14 points, using the line spacing of 18 points (one line spacing) in doc, rtf or odt document formats with text alignment to the width of the sheet. The dissertation must have a hard cover. Sizes of fields: upper and lower – not less than 20 mm, left – not less than 25 mm, right – not less than 10 mm.

All the pages of the dissertation, including illustrations and supplement, are numbered in order, without gaps and repetitions. The first page is considered to be a title page which is not numbered.

Page numbering is given in Arabic numerals.

The ordinal page number is usually printed in the middle of the top margin of the page.

The headings in *the section “Contents”* should exactly repeat the headings in the text. Headings shortening and their formulation different from that in the contents are not allowed. The last word of the heading with the corresponding page number in the right column of the contents is connected by the dots.

The section “List of Abbreviations and (or) Symbols” features abbreviations and (or) symbols which are arranged in a column, in the alphabetical order or in the order of their first mention in the text. A detailed interpretation of abbreviations and (or) symbols is given to the right of them. In case of recurrence of abbreviations and (or) symbols in the dissertation for less than five times, their full interpretation is given in the text at the first mention.

The section “Introduction” features the relevance and necessity of conducting the research on the topic of the dissertation to solve a scientific task, study a selected scientific problem, develop specific areas in the relevant branch of science, and reflects the place of the dissertation among other studies in this field.

The section “General Description of the Work” features:⁶

- connection of the work with the scientific programs (projects), themes;⁷
- goal and objectives of the research;
- scientific newness;
- defense statements;⁸

⁶ The presence of each of the listed structural elements is required. Structural elements “goals and objectives of the study”, “scientific newness”, “defense statements” should correlate with each other.

⁷ A PhD candidate should be involved in the implementation of any officially approved scientific research (for example, within the framework of the State Scientific-Research Institute, the Belarusian Republican Foundation for Fundamental Research grants, foreign grants, contracts, etc.).

⁸ As a rule, 3-5 statements are submitted for the dissertation defense. These are the main research findings for which a Ph.D. degree is awarded. For example, provisions include:

- new methods, methodological approaches (more often for the major 08.00.05);
- new identified patterns (for the majors 08.00.01 and 08.00.14);
- new models (for the major 08.00.13);
- new theoretical and methodological approaches (for all majors);
- practical recommendations (for all majors).

- personal contribution of the Ph.D. candidate;
- approbation of the dissertation and information on the use of its findings;⁹
- publication of the dissertation findings;
- dissertation structure and volume.

The main part of the dissertation includes an analytical review of the literature on the research topic, a description of the methods used, equipment and materials, as well as the nature and the main results of theoretical and / or experimental studies. The main part of the dissertation can be divided into chapters, sections and subsections, which are numbered in Arabic numerals.

The analytical review of the literature on the research topic includes an analysis of the research findings presented in national and foreign sources of scientific information, which ends with a detailed justification of the choice of the research field and the general concept of the work.

In the analytical review of the literature, a Ph.D. candidate provides an outline of the main stages in the development of scientific ideas on the problem under consideration, including a comparative analysis of methodological (methodical) approaches and the level of development of research in the relevant field of knowledge in Belarus and abroad.

The section “Conclusion” presents the findings of the research, recommendations, and prospects for further development of the dissertation topic.

The section “Conclusion” should contain two subsections: “The main scientific results of the dissertation” and “Recommendations for the practical use of the results”.

The section “Bibliographic List” or “References” should contain two subsections: “List of sources used”, including a list of sources of information to which the dissertation is cited, and “List of Ph.D. candidate’s publications” which contains bibliographic information about Ph.D. candidate’s publications on the topic of the dissertation.

The section “Supplement” includes supporting material. This section is created for a more complete disclosure of the content and results of the research, evaluation of their scientific and practical significance. The dissertation author determines the number of supplements.¹⁰

Author’s Abstract should be structured as follows:

Each defense statement must meet the following requirements:

- its essence should be explained in 1-2 sentences;
- it should have a scientific novelty, i.e. differ from the methodologies, approaches known in the world or the country (with differences specified);
- have practical significance, i.e. allow solving a real practical problem.

⁹ Approbation means not only participation in conferences, but also the implementation of the dissertation findings into the practical activities of specific organizations, ministries and departments (the dissertation is accompanied by the acts and certificates of implementation).

¹⁰ The volume of the supplements is not limited and not included in the total volume of the dissertation.

- Cover sheet;
- Text, including the sections “General Description of the Work”, “Main Part”, “Conclusion”;
- List of author’s works published on the topic of the dissertation;
- Summary.

The Author’s Abstract should fully disclose the content of the dissertation without unnecessary details and the information, which is not included in the dissertation. The Author’s Abstract is written in the language of the dissertation.

The sections “General Description of the Work” and “Conclusion” should fully repeat the relevant sections of the dissertation without exceptions and additions.

The section “Main Part” should fully, without unnecessary details, cover the contents of the dissertation chapters (sections) without information, which is not included in the dissertation.

The size of the Author’s Abstract text without its cover, the list of the author’s works published on the topic of the dissertation, and the summary should not exceed one author’s sheet of the dissertation (40,000 characters). A 15 percent increase is permitted in the Author’s Abstract volume of the dissertation in the field of the humanities.

The list of the Ph.D. candidate’s publications includes all the works related to the theme of the dissertation, as well as the works, which confirm the practical significance of its results. The bibliographic description of the publication must comply with the rules for the design of bibliographic sources.

At the end of the Author’s Abstract, there is a summary prepared for the dissemination and use of information about the dissertation. The summary should not exceed two thousand characters.

The summary consists of a title, a list of keywords, and the text.

The text of the summary should reflect the goal of the work, research methods and the equipment used, as well as the findings and their newness, recommendations for its application, and the sphere of application. In presenting the material of the summary, one should use syntactic constructions typical for the language of scientific documents, avoid complex grammatical constructions, use standardized terminology, and avoid rare terms and symbols.

Basic Requirements for Scientific Articles¹¹

A scientific article is a logically complete work devoted to a specific issue that is included in the range of problems (tasks) solved by a Ph.D. candidate in the dissertation research. The scientific article reveals the most significant results obtained by a Ph.D. candidate, requiring a detailed presentation and argumentation.

The volume of a scientific article on the topic of the dissertation should be at least 0.35 author’s sheet (14,000 printed characters, including spaces between

¹¹ Each scientific journal has its own requirements. Before submitting an article to a scientific journal, you must ask your supervisor if it is included in the list of the HAC.

words, punctuation marks, numbers, etc.), if allowed in the journal rules established for the authors.

Scientific articles published in the journals of the Republic of Belarus for publication of the dissertation findings include, unless otherwise specified in the journal rules established for the authors, such elements as:

- Annotation;
- Surname and initials of the author (authors) of the article, and its title;
- Introduction;
- Main part, including graphics and other illustrative material (if available);
- Clear conclusion;
- List of cited sources;
- Date of editors' receipt of the article.
- Additionally, in accordance with the requirements of the editorial boards of scientific journals, the structure of the article can also include:
 - List of symbols and abbreviations;
 - Abstract in English and / or another foreign language.

The list of the main legal acts which regulate the issues of obtaining postgraduate education and awarding a Ph.D. degree:¹²

1. Education Code of the Republic of Belarus;
2. Regulations on training researchers of advanced qualification in the Republic of Belarus (Decree of the President of the Republic of Belarus of December 1, 2011 No. 561);
3. Regulations on awarding academic degrees and ranks in the Republic of Belarus (Decree of the President of the Republic of Belarus of November 14, 2004 No. 560);
4. Regulation on the dissertations defense council (Resolution of the Higher Attestation Commission of the Republic of Belarus of February 22, 2005 No. 19);
5. Instructions on organizing a qualifying scientific work (dissertation) by Ph.D. candidates and Doctoral students, author's abstract and publications on the topic of the dissertation (Resolution of the Higher Attestation Commission of the Republic of Belarus of February 28, 2014 No. 3)

¹² For detailed information see HAC official Internet site <http://vak.org.by/>. The language of the site is only Russian.