**The Government of the Russian Federation**

**Federal State Autonomous Institution for Higher Professional Education National Research University Higher School of Economics**

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**St. Petersburg School of Economics and Management**

**GUIDELINES FOR PREPARATION AND DEFENSE OF MASTER THESIS**

**DATA ANALYTICS FOR BUSINESS AND ECONOMICS**

Area of Studies: 38.04.02 «MANAGEMENT»

Level: masters

*Approved:*

*Programme Academic Supervisor*

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*This programme may not be used by other campuses of the university or by other universities without the consent of the developers of this programme.*

**Table of contents**

[1. General rules 3](#_Toc146390774)

[2. Requirements for the master’s thesis 3](#_Toc146390775)

[2.1. The main part for research format 5](#_Toc146390776)

[2.2. The main part for project-analytical format 6](#_Toc146390777)

[2.3. Conclusions and references 7](#_Toc146390778)

[3. Writing the master’s thesis 8](#_Toc146390779)

[3.1. Suggestions, choice and confirmation of the theme of the master’s thesis, supervisors and reviews 8](#_Toc146390780)

[3.2. Stages of preparing the master’s thesis 8](#_Toc146390781)

[3.3. Scientific advising and consulting 9](#_Toc146390782)

[4. General requirements in the formulation of the master’s thesis 11](#_Toc146390783)

[4.1. Technical requirements 11](#_Toc146390784)

[4.2. Structured elements of the thesis 11](#_Toc146390785)

[4.3. The formatting of references 12](#_Toc146390786)

[4.4. The formatting of tables 12](#_Toc146390787)

[4.5. The formatting of illustrations 12](#_Toc146390788)

[4.6. Formulas 13](#_Toc146390789)

[4.7. Appendix 13](#_Toc146390790)

[5. Defence of the master’s thesis 13](#_Toc146390791)

[6. Appeals for the master’s thesis 16](#_Toc146390792)

[7. Storage of the master’s thesis 16](#_Toc146390793)

[Appendix 1 17](#_Toc146390794)

[Template of a Title List 17](#_Toc146390795)

[Appendix 2 18](#_Toc146390796)

[Supervisor’s Review Template 18](#_Toc146390797)

[Appendix 3 19](#_Toc146390798)

[Example of the formulation of the review by the reviewer 19](#_Toc146390799)

[Appendix 4 20](#_Toc146390800)

[Template Request for Change of Dissertation Topic 20](#_Toc146390801)

[Appendix 5 21](#_Toc146390802)

[Assessment criteria for Master Thesis defense evaluation 21](#_Toc146390803)

# 1. General rules

The current rules are prepared in accordance with the Regulations on Practical Training of Students under Core Bachelor’s, Specialist and Master’s Programmes at HSE University approved by the HSE Academic Council, minutes No.6 dated June 17, 2021.

The master’s thesis is completed by second-year master students in the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”. The master’s thesis is a key and obligatory element of the educational programme and is prepared as a scientific project of the student. The thesis is a required part of the final state certification.

The preparation of the master’s thesis is the final stage of the programme. Based on the results of the defence of this thesis, the State Examination Commission will decide whether to award the student a master’s degree.

The primary tasks for the completion and defence of the master’s thesis are the following:

* the deepening, systemization and integration of theoretical knowledge and practical skills acquired in higher education;
* the evaluation and summarization of theoretical positions;
* the application of knowledge to solve tasks in the relevant field of study
* the execution of an independent research project
* the presentation and defence in a public forum of scientific ideas, positions and recommendations

# 2. Requirements for the master’s thesis

The master’s thesis is an independent research project on a chosen topic, written under the supervision of the student’s scientific supervisor. The master’s thesis should demonstrate the student’s ability to formulate a problem statement, find out relevant research questions, choose and discuss relevant literature, summarise and analyse material and use theoretical knowledge and practical skills developed in the course of the study programme.

The master’s thesis is normally based on the student’s first-year term paper and should do the following:

* possess internal consistency, where each part of the thesis is related to the other parts;
* demonstrate the student’s ability to conduct an independent research project based on theoretical knowledge and practical skills;
* contain a formulation of the thesis’s objectives and tasks
* apply appropriate methods to achieve the objectives and execute the tasks of the thesis

It is possible to change the line of research after the 1st year of study and write master’s thesis on a topic unrelated to term paper topic.

The master’s thesis must be written in English.

The master’s thesis may be completed either individually or in groups of 2 or 3 students. The structure of the master’s thesis is the same for individual and group project proposals. However, the required length is larger for group master’s theses, as specified below.

The recommended length of the master’s thesis for individual master’s theses (i.e., for theses completed by one student) is 8,000 to 12,000 words. The recommended length for group master’s theses is 13,000 to 15,000 words (including the Reference list and the Appendices).

The format of the master’s thesis must correspond to the requirements given in this document.

The master’s thesis will be subject to review by someone other than the supervisor of the thesis. This reviewer will be an expert in the relevant area from one of the campuses of NRU HSE or from another university and/or representatives of business. The reviewer may not be a member of the same department as the supervisor of the thesis.

The master’s thesis may be written in one of two formats as given below. The research format for the “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” programme is preferable.

**Research format** – the thesis should be based on empirical research that attempts to obtain new knowledge about the structure, properties or empirical regularities of the object of the research. Relevant types of analysis include treatment effects, the testing of hypotheses and the testing of theoretical models.

**Project-analytical format** – developing a solution to a practical problem based on a comprehensive analysis of this problem. Such a format involves analysing a problematic situation, developing a set of tools that can be used to solve the challenges in this situation and making recommendations for how to use these tools to solve these challenges. With this format, the thesis is required to have practical significance and documental acceptance of the results from the organization. This format may be used only if a relevant project is proposed by a customer, as agreed with the student’s supervisor.

The master’s thesis in the research format should consist of the following parts:

* ***Abstract***
* ***Introduction***
* ***Literature review***
* ***Research design and methodology***
* ***Results and findings***
* ***Conclusion and discussion***
* ***References***
* ***Appendices, if relevant***

The master’s thesis in the project-analytical format should be coherent with the particular project aims. However, ***Abstract, Introduction, Conclusion and References*** are mandatory sections.

The **Abstract** is a short description of the objective and main results of the master’s thesis. For individual project proposals, the Abstract should be between 200-250 words. The Abstract should be placed after the table of contents but before the Introduction to the main text of the master’s thesis.

The **Introduction** should contain a discussion of the following:

* the relevance of the research problem or research question.
* the extent to which prior studies have analysed the topic of the thesis, and what is new about the analyses in the thesis – i.e., how the thesis differs from prior research on the topic of the thesis
* the objectives and tasks of the thesis, how these objectives will be achieved and how these tasks will be performed
* whom the results of the thesis could be relevant for
* the structure of the thesis
* the methods that will be used
* the object and subject of the research – theses in a project-analytical format
* the practical significance (project-analytical format) or scientific contribution (research format) of the thesis

After the Introduction, the focus, content and practical significance or scientific contribution of the thesis relative to prior studies should be clear.

The *structure of the thesis* should contain an outline of all of the sections in the document, indicate the number of pages in the thesis (without appendices) and specify the number of sources cited in the document.

The main part of the master’s thesis should contain a description of the state of the topic that the thesis focuses on – i.e., what is known about this topic, and what is not known. In general, the main part consists of two or three sections.

For both types of formats of the master’s thesis (research format or project-analytical format), the main part of the thesis should have a theoretical foundation.

In the **Theoretical foundation**, students should demonstrate the ability to do the following:

* to summarise and analyse in a critical manner theory relevant for the issue the thesis focuses on;
* to identify the most important theoretical issues relevant for the topic of the thesis;
* to use theory to develop a foundation for the empirical analyses in the thesis

In most cases, the master’s thesis focuses on a narrow research question. Hence, the overview of prior literature is based only on the relevant research question, not on the entire theme in general. Students should not discuss prior research that has only an indirect relationship to the research question.

The literature review should be based on only the most relevant and fundamental prior research. In the literature review, references to textbooks are not allowed. The literature review should not consist of only a list of previous studies and the primary conclusions of these studies. In the literature review, students are required to organize prior studies in a systematic way, to identify similarities and differences in these studies and justify the relevance of each prior study for the thesis. When different prior studies come to different conclusions, students should summarise these different conclusions and discuss which conclusion they agree with, using logical arguments and reasoning.

Examples of issues that should be discussed in this section include the following:

* What articles are important to highlight, and how have these articles contributed to the development of the issue the thesis focuses on?
* What issues do prior studies disagree on?
* How is it possible to develop further the research question – i.e., what issues have not been solved in full in prior research?

The theoretical foundation is the basis for the future development of the thesis – it facilitates the choice of methodology and the specific research question that the thesis will focus on.

The structure and content of the sections that follow the theoretical foundation depend on whether the thesis is in a research format or a project-analytical format:

## 2.1. The main part for research format

Theses, written in a research format, should include the following parts:

*Statement of the research question –* in this section, students specify the research question the thesis will focus on, the objective of the thesis and the methods that will be used and the tasks that will be solved to achieve this objective.

Examples of issues that should be discussed in this section include the following:

* What is necessary to achieve the objectives or to solve the tasks of the thesis?
* Are the proposed methods sufficient to analyse the stated research question?

This section should contain the following:

* the specification and development of the hypotheses;
* the justification of the methods used in the research
* A discussion of the relationship between this section and the theoretical foundation

*Research methods* – the section where students develop the methodology used in the thesis. This section should contain the following:

* a description of the objectives of the thesis and the research design used to achieve these objectives (the main stages and the sequence of these stages);
* a description of the data collected in each stage of the research process
* a description of the tools used in the thesis (these tools should be included in an attachment to the thesis – for example, as a Do-file from Stata)
* a description of the process used to collect data, data sources, the sample and the representativeness of the sample
* a description of the methods and procedures used to analyse data and of the statistical software used to analyse data

For theses based on hypothesis testing, at the beginning of the methodology section, students should justify and develop their hypotheses and specify the relationship between these hypotheses and the theoretical foundation of the thesis.

The objective of this section is to justify why the data and methods used in the thesis can be used to analyse the research question. Examples of issues that should be discussed in this section:

* How will the methods from the prior point be used?
* What data will be used, and why?
* How will data be gathered and analysed?

In this section, it is necessary to present a convincing argument that the data and methods are relevant for the research question and to discuss the limitations of the methods and data that are used.

*Description of the results* – the section where students present the results of their empirical analyses and interpret these results. Examples of issues that should be discussed in this section include the following:

* What are the primary results of the research?
* How could these results be interpreted?
* How are these results similar to and different than the results of prior studies?

This section should contain an objective description of these results. This section should not contain a critical analysis or a discussion of conclusions that could be drawn based on these results. Based on the results of this section, it should be clear which hypotheses are confirmed, which hypotheses are rejected, which hypotheses are statistically significant. In addition, based on the results of this section, the quality of the model should be clear. To make the results easier to interpret, it is recommended to present the results using tables, graphs, diagrams, etc.

All of the source files, including files with algorithms and code, that the results are based on should be included as an attachment – either in paper or in electronic form.

## 2.2. The main part for project-analytical format

Theses, written in a project-analytical format, should include the following parts:

The *Analytical section* of the thesis should contain a general description of the object of the thesis, an analysis of the relevant problem and data developed with modern techniques described in the theoretical foundation of the thesis. In addition, this section should contain different indicators related to the characteristics of the research object. This section should also contain a justification for the subsequent development of the thesis.

This section should start with a description of the object researched in the thesis and a justification of why it is necessary to examine this object. Relevant reasons include a decline in the market, financial or organizational position of the object, potential new developments in the object, the initiation of new projects, etc.

Next, this section should include a comprehensive analysis, starting from the formulation of the research programme. The research programme includes the different stages of analysis and the definition of instruments and statistical data that will be used in each stage of the analyses.

This section should conclude with conclusions and recommendations for further measures that could be taken. These further measures are the basis for the third part of the master’s thesis.

The *Project section* should contain the development of a set of measures for the solution of the stated problem as well as forecasts, with supporting calculations, for the results of the application of these measures. The basic requirement for this section is to present a comprehensive, thorough and complete solution to the problem studied in the thesis. This section should not include only general recommendations or general suggestions for further development. All of the suggestions and recommendations should be developed to the stage of implementation and should have a concrete character. The thesis should show how these measures affect indicators relevant for the firm, organization, etc.

## 2.3. Conclusions and references

For both types of format (research and project-analytical), each section of the master’s thesis should conclude with conclusions that are based on logical reasoning and that lead to the next part of the thesis.

For both types of format (research and project-analytical), the final section is the **Conclusion**. In this section, students are required to summarise the theoretical and empirical parts of the thesis and to discuss potential directions for future research.

The conclusion could contain the following:

* A more subjective discussion and critical analysis (relative to the discussion in the section Description of the results) of the results the empirical analyses
* The contribution of the results – e.g., to the creation of new knowledge, to helping organizations operate in a more-effective manner
* The primary limitations of the thesis, and how these limitations could be overcome in future research
* Whether using different assumptions, methodologies, etc. could lead to different results
* How the topic of this research could be further developed in future research

The total number of conclusions can differ between theses but should be between at least 3 to 5. With more than 5 conclusions, it could be useful to impose additional structure on these conclusions – for example, by placing conclusions into groups. The conclusions should contain an evaluation of the correspondence of the results with the stated goals, tasks and problem of the thesis.

The conclusion should not be a summary of the prior sections of the research.

After the conclusion, the thesis should include a **Reference list**. Each reference included in the reference list should be cited in the text. The reference list should consist of at least 30 references, including monographs, scientific articles (normative acts are not regarded as either a monograph or a scientific article). No textbook references are recommended. References should consist of modern sources (not older than 5 years), except for the references connected with theories.

The **Appendices** are included after the reference list. The objective of including material in the appendices is to avoid including in the text calculations, data, etc. that contain information that is relevant but not essential for the main research problem of the thesis. Each appendix should begin on a new page, have its own heading and be included in the table of contents for the thesis.

# 3. Writing the master’s thesis

## 3.1. Suggestions, choice and confirmation of the theme of the master’s thesis, supervisors and reviews

***September 10-October 10*** – during this period, potential supervisors for master’s theses at the NRU HSE in St. Petersburg will make suggestions for thesis topics. In addition, the partners of NRU HSE in St. Petersburg and other employers can propose topics. Proposed topics are to be approved by academic director and academic council of the programme. The academic council reserves the right to exclude topics that do not correspond to the level of students and direction of study in the study programme.

***October 10-November 20*** – during this period, students choose the topic of their master’s thesis. During this period, all students will receive access through LMS to the list of topics agreed by the academic director of the study programme. The approval of the student’s application serves as approval of the topic. In the process of discussing the topic of the thesis, the topic can be adjusted. Supervisors may use as methods of communication meetings with the students, messages via email, etc.

Students have the right to propose their own topics to the academic supervisor of the study programme and potential supervisors. The programme academic supervisor has the right to approve the topic, reject the topic or work with the student to reformulate the topic.

Within five working days after the process for choosing the themes of the master’s thesis has concluded, Programme Academic Supervisor of the programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” has to make a decision of approval about the chosen topics and supervisors of the master’s thesis.

Not later than December 15 of the current academic year, Programme Office issues a directive on thesis topics and supervisors for all students; thesis topics are registered in the individual study plans of students, which means the emergence of an obligation to complete the work by students.

After the issuance of the order, the study office of the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” will issue to all supervisors of master’s theses a list of students and the themes of their theses. As of this moment in time, the study office is required to inform supervisors of the master’s theses about the timetable for completing each stage of the master’s thesis and about the rules for completing the master’s thesis in the relevant study programme.

Changes, including clarifications, in the topic of the master’s thesis are possible no later than one calendar month before submission of the final version of the master’s thesis is passed (see template in Appendix 4). Such changes are allowed only in accordance with the procedures specified by the relevant study programme. Changes in topics are produced by the directive of the dean of the faculty.

Students who do not choose a topic for their master’s thesis by the specified deadline will incur an academic debt.

## 3.2. Stages of preparing the master’s thesis

**Preparation of the project thesis.** At this stage, students should develop provisional hypotheses and plans for the thesis, identify the issue that the thesis will focus on and propose the basic structure of their thesis.

The project thesis may be prepared in the course of the research seminar and individual meetings with the student’s supervisor or potential supervisor. The project thesis is evaluated by the supervisor of the thesis on the basis of ‘approve/do not approve.’ Students may develop further project theses that have not been approved and may submit again the project theses at a date agreed to with the student’s supervisor; however, this date may be no later than December 25 of the current academic year. If the thesis is not approved by this date, the supervisor of the project thesis is required to notify through LMS or corporate email the study office of the study programme of the relevant student.

**The presentation of the first version of the master’s thesis**. The text of the first version of the master’s thesis should be submitted to the supervisor of the master’s thesis no later than March 15 of the current academic year. If necessary, after this date, the student may correct the text. If the first version of the master’s thesis is not submitted before this date, the student’s supervisor is required to notify the study office of the study programme of the relevant student.

**Oral pre-defence of master’s thesis**. This step is an interim attestation of students’ preparation of the master’s thesis. It conducts as an oral defence of the detailed plan of the master’s thesis together with preliminary findings and conclusions.The presentation is held in English in April-May in the form of research seminar.

**Improvement and preparation of the final version of the master’s thesis.** On this step, if necessary, students make improvements to the final version of the master’s thesis. As of the end of this step, students submit to their supervisor the abstract and the final version of their master’s thesis for review no later than one month before the start of the defences of the master’s thesis.

Supervisors are required to submit to the study office of the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” or upload on LMS their **review** within the calendar week after receiving the final version of the master’s thesis. For group master’s theses, the supervisor should submit only one report per group.

**Uploading the master’s thesis into the Antiplagiarism system Antiplagiat.** Students are required to upload an electronic, unscanned file of the final version of their master’s thesis into a special module on LMS. For theses completed in groups, only one group member is required to upload the thesis to this module, making sure that other group members are identified by the system and included in the submission. After doing so, the master’s thesis will be passed through the anti-plagiarism system Antiplagiat.

If plagiarism is detected during any point in the preparation of the master’s thesis, studentscan be subjected to disciplinary actions in accordance with the Procedures for Taking Disciplinary Action for Violation of Academic Standards, as specified in Appendix 2 in the Student Internal Regulations at NRU HSE.

**Review of the master’s thesis.** The reviewer of the master’s thesis is appointed from the list of professors or scientific employees of the university. The reviewer may not be a member of the same department as the supervisor of the thesis. The reviewer may be a representative of an organization of higher education or an employee of an organization from a professional sphere that corresponds to the theme of the master’s thesis.

The study office will send to the reviewer the master’s thesis no later than three calendar days after receiving the master’s thesis. The reviewer will prepare the review and submit the review in written form to the relevant person for the study office no later than five days before the defence of the master’s thesis.

The **defence of the master’s thesis** is governed by the Regulations on Final State Certification of Students in Bachelor’s, Specialist and Master’s Degree Programmes at NRU HSE.

## 3.3. Scientific advising and consulting

Direct supervision of the master’s thesis is provided by the supervisor, as indicated by the directive of the St. Petersburg campus of the NRU HSE, from the list of professors in the Department of Management or Department of Economics at St. Petersburg campus of the NRU HSE or as otherwise agreed by the academic director of the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” from a list of representatives of other organizations.

Consulting help for the master’s thesis may be provided by members of the Department of Management or Department of Economics of the NRU HSE St. Petersburg of employees of external organizations whose professional activity or scientific interests are related to the theme of the master’s thesis. Consultants provide an additional voice for the development of the master’s thesis. Students whose theses relate to two areas may be able to receive consulting advice from two consultants. The decision about whether to appoint consultants is made by the academic director of the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” based on the application of the student.

The switching of supervisors and the appointment of consultants is governed by the directive of the NRU HSE St. Petersburg upon the recommendation of the supervisor of the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”. A change in supervisors is allowed no later than 2 months before the submission of the final version of the master’s thesis.

Supervisors have the following obligations:

* to provide consulting help to the student in the choice of topic for and the development of the plan of the master’s thesis;
* to provide consulting help on the choice of literature, methodology, calculations and conclusions;
* to provide an evaluation of the quality of the work in relation to the requirements of the master’s thesis;
* to harmonize the information about the master’s thesis provided by the student for the thesis’s placement on the website of the NRU HSE or on other electronic resources

Supervisors have the right:

* to organize communications between themselves and students in a way that is convenient for both themselves and the students, including to define the frequency of personal meetings and other forms of contact
* to agree with the student on a plan for the preparation and completion of the master’s thesis
* from the results of each meeting, to require students to prepare a short summary of the recommendations and future steps for the preparation of the master’s thesis
* to require that students adhere to the recommendations received and come to the meetings prepared
* when evaluating the master’s thesis, to take into account students’ compliance with the intermediate deadlines for the master’s thesis, the deadline for submitting the final version of the master’s thesis and the plan for preparing and completing the master’s thesis
* to participate in the meeting of the State Examination Commission during the defence of the master’s thesis

If the supervisor is not an employee of the NRU HSE St. Petersburg, the liaison of the master’s thesis is required to do the following:

* together with the supervisor, to monitor students’ progress on their master’s thesis in relation to the plan of progress;
* to notify the study office of the study programme if the student does not comply with the plan for completing the master’s thesis;

Consultants are required to do the following:

* to provide assistance to students in choosing the method of research, in identifying relevant literature and in identifying other relevant material
* to give students recommendations on the content of the master’s thesis

The supervisor of the master’s thesis controls all stages of the preparation and writing of the master’s thesis, all the way until the defence. Students are recommended to report on a regular basis to their supervisor on their progress in completing the master’s thesis.

# 4. General requirements in the formulation of the master’s thesis

## 4.1. Technical requirements

The master’s thesis should be printed on standard sheets of paper using the format А4. The four sides of the pages should have the following margins: left margin – 35 mm; right margin– not less than 10 mm; upper and lower margins – not less than 20 mm. Each page should have approximately 2,000 characters.

Line spacing:

* Main text – 1.5
* Reference list – 1.5
* Tables, figures and graphs – 1
* Footnotes – 1

Font – Times New Roman. Other fonts are not allowed.

Font size:

* Main text – 12
* Reference list – 12
* Shorter tables, figures, graphs and equations – 12
* Larger tables – not less than 10
* Footnotes – 10

Font colour – black. Drawings and graphs may be presented only in black and white.

Alignment:

* Main text, reference list, footnotes, abstract and keywords – by width
* Headings – centred

Each new section should begin on a new page. This same rule applies to the other main parts of the thesis (Introduction, Conclusion, Reference list, Appendices, etc.). Paragraphs should be indented at 1.25 cm. The main text should be aligned by width. A subsection may be started on the current page if at least five lines of text (not including the name of the subsection) from this subsection would be on the current page.

Pages should be numbered starting from the title page, but the page number should be shown starting only from the second page – i.e., on the title page, the page number should not be shown. Page numbers should be shown on the bottom of each page, either in the centre or on the right, with no period.

The master’s thesis begins with the title page. The title page provides information about the academic institution where the work was completed; the title of the thesis; the type of thesis; the last name, initials and group of the student; the last name, initials and academic degree and position of the scientific supervisor; and the city where and year in the work was conducted (see Appendix 1).

The second page of the thesis contains the abstract. The third page contains the table of contents. The table of contents includes the name and the number of the first page of each part of the master’s thesis, except for the title page. ‘Page’ or an equivalent designation is not included in front of the number.

To highlight certain terms or formulas, the use of either bold or italics is permitted. Underlined text (example) is not allowed. Moreover, only one of either bold or italics may be used at a time – the use of bold and italics (***example***) in one term is not allowed.

## 4.2. Structured elements of the thesis

The headings of the structured elements of the thesis (Table of contents, Abstract, Introduction, Conclusion, Reference list) are placed in the middle of the line without a period at the end. All letters are in lowercase, except for the first letter of the first word. Bold font and italics should not be used.

The headings of paragraphs should be indented, with a period at the end. The first letter should be capitalized. Bold font and italics should not be used. If the heading consists of two sentences, these two sentences should be divided with a period.

It is recommended to start sections on a new page. It is recommended to place one ordinary line between the lines of headings, and in front of the text – three ordinary lines. The space between headings of the sections and sub-sections – two ordinary lines. Between the text and the start of the next subsection – three ordinary lines.

It is recommended to number sections and sub-sections with Arabic numbers. Sections should contain consecutive numbering within the text, except the appendices. The number of subsections includes the number of the section and the number of the subsection, divided by a period – for example, 1.1, 1.2, 1.3, etc. A period should not be placed after the number of the subsection. Headings for the third level and below should not be used.

## 4.3. The formatting of references

All references should be prepared in APA 6th style; in <https://www.apastyle.org/learn/index> there is a section with frequent questions on references.

## 4.4. The formatting of tables

As a rule, material with numbers is formatted as a table. Depending on its size, a table generally is placed under the text where it is first referenced. If the size of the table exceeds the amount of space on the bottom of the page, the table may be placed on the following page. In this case, the remaining space on the bottom of the page should be filled with text.

Each table should contain a heading that reflects its content. The heading of the table should be placed above the table, should be centred and should be written with lowercase letters, except for the first letter. A period should not be place after the end of the heading.

If the table includes information from literary material, a reference to this material should be included in the table.

Tables should contain consecutive numbering throughout the text of the master’s thesis. A period should not be placed after the number of the table. The sign ‘#’ or ‘№’ should not be placed in front of the number of the table.

In tables, a smaller font size may be used than in the main text. Bold font and cursive may not be used in the headings of the tables or graphs or in the tables themselves. The heading of graphs and the lines of tables should begin with a capital letter. The table should indicate the unit of measurement for the numbers given in the table. The absence of a given number should be indicated with a dash. Parts of a graph or table that do not have to be filled out are marked with an ‘x’.

The width of the table should correspond to the width of the main text. If the width of the table exceeds the width of the main text, the table should either be placed in landscape format or included in an appendix.

The heading of the table and all lines of the table should be included on the same page.

## 4.5. The formatting of illustrations

As illustrations, the thesis may include drawings, diagrams, figures, etc. All illustrations are indicated with the word ‘Figure’. Illustrations can be done on a computer either in black and white or in colour.

Depending on its size, an illustration may be placed in the text after the paragraph that first refers to the illustration or on the next page – or, if necessary, in the appendix. The illustration should be centred.

All illustrations should be named, with the name given under the illustration. The word ‘Figure’, with a capital letter, should be placed before the number, followed by a space and the number of the figure.

Figures should contain consecutive numbering throughout the text. The number should be followed by a period, a space and the name of the drawing in lowercase letters, except for the first letter. A period is not placed after the name of the figure.

Figures and tables are numbered independently of each other.

If the illustration includes information from literary material, a reference to this material should be included in the illustration.

## 4.6. Formulas

If necessary, the master’s thesis may contain formulas.

Formulas are placed either on a separate line, centred, or within the text. It is recommended to place in the text short, simple formulas. These formulas should not be numbered. More important formulas, or formulas that are longer are more complex (e.g., formulas that involve differentiation, integration, etc.), should be placed on a separate line, centred and numbered.

Formulas should be numbered consecutively throughout the thesis. A period is not placed after the number of the formulas. The number is written in Arabic numbering, in parentheses, to the right of the formula.

The meaning of symbols, coefficients, etc. in a given formula should be given in the text below the formula, if these symbols, coefficients, etc. have not been explained earlier in the text. Each symbol should be shown on a separate line, in the same sequence as in the formula.

Two lines should be placed between the end of the list of symbols, coefficients, etc. and the main text.

## 4.7. Appendix

The appendix is the final part of the master’s thesis. The appendix contains supplemental material that is helpful in understanding the main text. The appendix may contain many different types of contain – e.g., extracts from reports, copies from documents, individual parts of instructions, etc. The appendix can include text tables, graphs, etc. The appendix is included after the reference list.

Each appendix should begin with a new page, with ‘Appendix’ indicated in the upper-right corner of the page. ‘Appendix’ should be followed by the number of the appendix, in Arabic numbering. Each appendix should contain a heading that describes the content of the appendix. The title of the appendix should be in lowercase letters, except for the first letter of the first word of the appendix, and should be placed on a separate line.

The appendices should contain consecutive page numbers, continuing from the page numbers in the main text and reference list. Appendices should be ordered based on the order of each appendix in the text – e.g., the appendix referred to first in the text is Appendix 1; the appendix referred to second is Appendix 2; etc.

If the appendix contains multiple connected structural elements (e.g., multiple tables, multiple illustrations), these elements should be numbered (e.g., Table 1, Table 2, etc.). Each structural element should contain its own heading and name.

# 5. Defence of the master’s thesis

Upon completing their master’s thesis in accordance with the requirements of the master’s thesis, students upload their master’s thesis to LMS. Upon receiving a student’s master’s thesis through LMS, the supervisor prepares a written review of the thesis, signs it and uploads a scan copy also to LMS or submits to Study Office. For master’s theses completed in groups, the supervisor should prepare this review, etc. only one time per group.

If a student does not submit the master’s thesis by the specified deadline, within three days, the study office for the study programme will present to the dean of the faculty an act, signed by the academic director of the programme, about the non-submission of the thesis. The student who has not summited their master’s thesis by the deadline is not allowed to defend the thesis and is subject to dismissal from the university, in accordance with the local regulations of the NRU HSE.

**Review of the supervisor.**After receiving the final version of the master’s thesis, the supervisor prepares a written report of the thesis. This report contains an assessment of the overall quality of the thesis, the positive aspects of the thesis and the negative aspects of the thesis that the supervisor provided comments on but that the student did not fix. The report also contains a discussion of to what extent the student complied with the plan of preparation for the master’s thesis, the frequency of consultations, the diligence of the student in working on the thesis, the degree of the student’s independence in working on the thesis, the creative approach of the student and the extent of the thesis’s compliance with the requirements for the master’s thesis.

The receipt of a negative review from the supervisor does not imply that the master’s thesis may not be defended in the thesis defence.

Appendix 2 contains an example of the formulation of the report of the supervisor and the basic positions that should be contained in the report.

The percentage of original text in the master’s thesis, as measured by the programme Antiplagiat, should not be less than 80% Work with signs of plagiarism will be examined at a meeting of the State Examination Commission. If plagiarism is confirmed, the thesis will receive an evaluation of ‘Unsatisfactory’, regardless of which section of the thesis the plagiarism appears in.

Master’s theses that were reviewed by supervisors are sent for an external review.

**Review.**The review should contain an assessment of the relevance of the theme, the presence of the author’s own point of view, the ability to use appropriate methods for the collection and development of information, the degree to which the conclusions and recommendations are based on the analyses in the thesis, the credibility of the results and the practical significance of the thesis. The review should comment on both the positive and negative aspects of the thesis; in particular the negative aspects should be related to the logic and literacy of the exposition of the material and factual mistakes. In the conclusion, reviewers should specify their point of view about the quality of the thesis and evaluate the thesis on a scale from 1-10. For master’s theses completed in groups, the reviewer will provide only one review per group. In addition, the evaluation given by the reviewer will be the same for each member of the group.

Students will get access to the review vial LMS no later than five calendar days before the defence of the master’s thesis

The defence of the master’s thesis will be held at the time established by the meeting of the State Examination Commission for the study programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”. It is recommended that in addition to the members of the examination committee, the student’s supervisor, consultants and reviewers are present for the defence.

The rules and procedures for the defence of the master’s thesis are defined in the Regulations on Final State Certification of Students in Bachelor’s, Specialist and Master’s Programmes at National Research University Higher School of Economics. The evaluation of the final state certification may be deemed invalid by the chairperson of the State Examination Commission if the rules or procedures for the defence of the master’s thesis are violated.

The defence of the master’s thesis will be held in English. For the defence, the evaluation commission should be formed in a way where the members of the commission understand English to a sufficient degree to evaluate the academic quality of the presentation.

The defence begins with a presentation by the student on the theme of the master’s thesis. For individual master’s theses, the length of this presentation should not be longer than 20 minutes. For group master’s theses, the length of this presentation should not be longer than 30 minutes, and each group member should speak for a similar amount of time. During this presentation, students are required to use multimedia tools – e.g., PowerPoint slides. Students are not allowed to read text from notecards or from the computer. Students are permitted to use graphs, tables, etc. or other material to illustrate relevant aspects of the thesis.

After the completion of the presentation, the members of the State Examination Commission will ask the student questions that have a direct connection or a close relationship with the theme of the thesis. When responding, students have the right to use their thesis. For group master’s theses, each group member should participate in responding to the questions from the State Examination Commission.

The State Examination Commission has access to each student’s thesis, their supervisor’s and external reviews.

After the discussion, students are required to give concluding remarks. In these remarks, students should respond to the comments of the reviewer. For group master’s theses, each group member should speak for a similar amount of time.

After the student’s concluding remarks, the defence of the master’s thesis is over.

For group master’s theses, each group member may receive the different evaluation. In the case of disagreements, the chairperson of the State Examination Commission has the deciding vote.

The defence of the master’s thesis is evaluated on a five-point and ten-point scale. The assessment criteria are provided in Appendix 5.The evaluation is entered into the protocol of the meeting of the commission that includes the chairperson and members of the State Examination Commission (SEC). Grade from the State Examination Commission (SEC) is given based on the presented text, material and the presenttation at the defense and students’ answers for State Examination Committee questions. Grade is calculated as an arithmetic average of the total grades of each member of the State Examination Commission.

The rule of rounding for master thesis grade is the following: if the decimal part of a number is less than 0.5, then the number is rounded down. For example, the number 5.2 will be rounded to 5. If the decimal part of the number is greater than or equal to 0.5, then the number will be rounded up. For example, the number 6.5 will be rounded to 7.

The following criteria is used when giving excellent grades:

“8” – stands for successful and fruitful student’s activity during Thesis completion, great work with large datasets and excellent communication at the Defense of the Thesis;

“9” – stands for unsurpassed result/s of a student’s activity during Thesis completion that brought feasible positive results for the process/place of observation and has to be documentally supported (for example, in the form of open-source report); great work with large datasets and excellent communication at the Defense of the Thesis;

“10” – stands for unsurpassed result/s of a student’s activity during Thesis completion that brought feasible positive results for the process/place of observation and has to be documentally supported by outside organization or in the form of open-source report or in the form of submitted publication in academic journal of good rating (according to the lists of HSE); great work with large datasets and excellent communication at the Defense of the Thesis.

Grade for the Thesis can be different for each of the students if Thesis is done in group. Students have to specify input of each of the group member in the Introduction section.

If a student receives the evaluation ‘Unsatisfactory’ for the defence of the master’s thesis, the student gets expelled from HSE University. They will have the right to reinstate for defending their thesis repeatedly within 5 years in accordance with the Rules for the final state attestation of graduates of the state university Higher School of Economics.

If a student is not present at the defence because of a valid reason, the defence may be rescheduled within 6 months in accordance with the Regulations on Final State Certification of Students in Bachelor’s, Specialist and Master’s Programmes at National Research University Higher School of Economics.

Based on the results of the defence of the master’s thesis, the SEC will make a decision about whether to grant the student the degree in the programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS” and about the issuance of a document for higher education.

In addition to evaluating the master’s thesis, the SEC will make a decision about recommending for participation in competitions for scientific work and for publication in academic journals.

# 6. Appeals for the master’s thesis

In accordance with point 49 of Order 636 of the Ministry of Education and Science, ‘On the confirmation of the regulations for conducting the state’s final attestation in educational programmes of higher education – master’s programmes, specialist programmes and master’s programmes,’ from June 29, 2015, students who do not pass the state’s final attestation have the right to submit personally, no later than the following working day after the state’s final attestation, a written petition for an appeal in connection with issues related to the procedure of conducting the state’s final attestation and (or) disagreement with the results of the state exam.

The composition of the appeals committee is approved by the director of the NRU HSE Saint Petersburg. The appeals committee consists of no less than four faculty members from the NRU HSE St. Petersburg who are not members of the SEC. The secretary of the SEC is required to send to the appeals committee the protocol from the meeting of the SEC, the conclusion of the chairperson of the SEC regarding the observation of procedural issues during the state’s final attestation and the master’s thesis itself, the report from the supervisor, and the review.

The appeal will be considered not later than 2 working days from the day when the student submits a petition for an appeal. The decision of the appeals committee is given to the student within three working days from the day of the meeting of the appeals committee. The student is required to acknowledge with a handwritten signature receipt of the decision of the appeals committee.

When making a decision on the student’s appeal, the appeals committee is governed by Order 636 of the Ministry of Education and Science, ‘On the confirmation of the regulations for conducting the state’s final attestation in educational programmes of higher education – master’s programmes, specialist programmes and master’s programmes’. The decision of the appeals committee is taken by a simple majority vote and is formalized by the protocol. In the case of a tie, the chairperson of the appeals committee has the deciding vote.

The decision of the appeals committee is given no later than the next working day to the SEC. The decision of the appeals committee is the basis for annulling the earlier decision of the state attestation examination and applying a new decision. The decision of the appeals committee is final and may not be reviewed. The repeated state attestation examination must be carried out in the presence of at least one of the members of the appeals committee no later than 7 days from the positive decision of the appeals committee, but no later than July 15.

Appeals of the results of repeated state attestation exam are not allowed.

# 7. Storage of the master’s thesis

Master’s theses that have passed the procedure of the defence are stored electronically in LMS for no less than 5 years

The publication of the abstract and complete text of the master’s thesis on the university’s website is carried out in accordance with the local normative acts of the NRU HSE.

**Appendices**

**To GUIDELINES FOR PREPARATION AND DEFENSE OF MASTER THESIS**

# Appendix 1

## Template of a Title List

FEDERAL STATE EDUCATIONAL INSTITUTION

OF HIGHER EDUCATION

NATIONAL RESEARCH UNIVERSITY

HIGHER SCHOOL OF ECONOMICS

**Saint Petersburg School of Economics and Management**

Last name First name Middle name of the author

**name of the topic of the master’s thesis**

Master’s thesis

In the field 38.04.02 ‘Management’

Educational programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”

|  |  |
| --- | --- |
| ReviewerPosition, degreeInitials Last Name | SupervisorPosition, degreeInitials Last name |

Saint Petersburg 2024

# Appendix 2

## Supervisor’s Review Template

**Federal State Autonomous Institution for Higher Professional Education**

**National Research University Higher School of Economics**

**St. Petersburg Branch**

**St. Petersburg School of Economics and Management**

**Supervisor Review of the Master’s Thesis**

prepared by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

*(student’s full name)*

student of Master’s Programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”, group \_\_\_\_\_\_\_\_\_\_\_\_

Master’s thesis topic: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| No. | **Evaluation criteria** | **Comments** |
| **1.** | Structure and logical organization  |  |
| **2.** | The quality of the justification of the relevance of the research question |  |
| **3.** | Originality and innovativeness  |  |
| **4.** | Line of argument adopted to convey main ideas of Master’s thesis  |  |
| **5.** | Grammar and formatting  |  |
| **6.** | The quality of the literature review |  |
| **7.** | The relevance of collected data |  |
|  | Approval for the defense | Yes/No |
|  | Recommended grade |  |

Additional comments[[1]](#footnote-1):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Supervisor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(signature) (full name, academic degree, position , subdivision)*

“\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_202\_\_

# Appendix 3

## Example of the formulation of the review by the reviewer

Federal state educational institution of higher education National Research University ‘Higher School of Economics’

**Saint Petersburg School of Economics and Management**

**Department of Management**

**Review**

of the master’s thesis

Student\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ,

Last name, First name, Middle name

2nd year, educational programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”

on the theme: ‘\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_’

*Please characterize:*

* **The general characteristics of the thesis:** the presence of a research question; the clarity of the formulation of the problem and hypotheses of the research; the correspondence of the research question to the topic of the thesis; the discussion of the topic, the completeness of the presentation of the material on the topic; the logic of the thesis and its correspondence to the tasks of the research
* **The methodology and methods:** the appropriateness and justification of the methods; the correspondence between the methods of the thesis, the research question and the tasks of the thesis
* **The theoretical and empirical foundation of the thesis**: the thoroughness of the discussion of relevant theory; the quality of the discussion about the condition of the research question; the use of appropriate data sources.
* **Conclusions:** to what extent the conclusions and recommendations are justified based on the empirical results; the credibility of the results
* **Formatting:** the thesis’s correspondence to academic standards in style and use of terminology
* **Strong points and weak points of the thesis**
* **Whether the thesis should be admitted to defence**
* **Recommended evaluation on a five-point and ten-point scale**

Reviewer

Scientific degree, position,

Place of work\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /Signature/\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Initials Last name

# Appendix 4

## Template Request for Change of Dissertation Topic

TO:

Academic Supervisor of the Master’s Programme “DATA ANALYTICS FOR BUSINESS AND ECONOMICS”

Associate Professor N.V. Volkova

FROM:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(full name)*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Group No.\_\_\_\_\_\_\_\_\_

**Request**

I hereby request to change the topic of my dissertation from

“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

(topic in English) “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”(topic in Russian)

to“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

(topic in English) “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”(topic in Russian)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(Student’s signature)*

“\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*(Supervisor’s signature)*

“\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20\_

# Appendix 5

## Assessment criteria for Master Thesis defense evaluation (research format)

Assessment list

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time | Student/s name/s | Topic title | Overall presentation(out of 20 points) | Introduction & LR(out of 40 points) | Methodology & Results (out of 40 points) | **Reasonable grade****(out of 10)** |
| 00:00 - 00:00 |  |  |  |  |  |  |
| 00:00 - 00:00 |  |  |  |  |  |  |

Explanation of criteria

|  |  |  |
| --- | --- | --- |
| **Category** | **Scoring Criteria** | **Points** |
| **Overall presentation**(max 20 points) | Information in the presentation is delivered in a logical sequence | 5 |
| Length of presentation is within the assigned time limits | 5 |
| Speaker uses a clear, audible voice; Delivery is poised, controlled, and smooth. | 5 |
| Speaker understands the questions and all questions after the presentation are answered | 5 |
| **Introduction & Literature review** (max 40 points) | Introduction is attention-getting, lays out the problem well, and establishes a framework for the rest of the presentation. | 10 |
| Technical terms are well-defined in language appropriate for the target audience | 10 |
| Presentation contains accurate information and facts and appropriately cites requisite number of references | 10 |
| Material included for theoretical basis is relevant to the overall message/purpose (not less than 30 sources from the latest 5 years) | 10 |
| **Methodology and Results** (max 40 points) | Choice for the methods is well argumented | 10 |
| Good explanation of the results is delivered | 10 |
| Visual aids are well prepared, informative, effective, and not distracting | 10 |
| There is an obvious conclusion summarizing the presentation | 10 |
| **Grade (calculated on the basis of total points/10)** | **Total Points** | **100** |

## Assessment criteria for Master Thesis defense evaluation (project-analytical format)

Assessment list

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time | Student/s name/s | Topic title | Overall presentation(out of 20 points) | Analytical section(out of 40 points) | Project section(out of 40 points) | **Reasonable grade****(out of 10)** |
| 00:00 - 00:00 |  |  |  |  |  |  |
| 00:00 - 00:00 |  |  |  |  |  |  |

Explanation of criteria

|  |  |  |
| --- | --- | --- |
| **Category** | **Scoring Criteria** | **Points** |
| **Overall presentation**(max 20 points) | Information in the presentation is delivered in a logical sequence | 5 |
| Length of presentation is within the assigned time limits | 5 |
| Speaker uses a clear, audible voice; Delivery is poised, controlled, and smooth. | 5 |
| Speaker understands the questions and all questions after the presentation are answered | 5 |
| **Analytical section** (max 40 points) | Introduction is attention-getting, lays out the problem well, and establishes a framework for the rest of the presentation. Technical terms are well-defined in language appropriate for the target audience | 10 |
| Analysis of the relevant problem and data developed with modern techniques described in the theoretical foundation (not less than 30 sources from the latest 5 years), contains accurate information and facts | 10 |
| Includes a comprehensive analysis, starting from the formulation of the research programme (different stages of analysis and the definition of instruments and statistical data that will be used in each stage of the analyses) | 10 |
| Contains conclusions and recommendations for further measures that could be taken | 10 |
| **Project section** (max 40 points) | Development of a set of measures for the solution of the stated problem as well as forecasts, with supporting calculations, for the results of the application of these measures, is delivered | 10 |
| Presentation of a comprehensive, thorough and complete solution to the problem studied that was accepted/incorporated by the organization is made | 10 |
| Visual aids are well prepared, informative, effective, and not distracting | 10 |
| Explanation of how these measures affect indicators relevant for the organization is provided | 10 |
| **Grade (calculated on the basis of total points/10)** | **Total Points** | **100** |

1. These comments contain an assessment of the overall quality of the thesis, the positive aspects of the thesis and the negative aspects of the thesis that the supervisor provided comments on but that the student did not fix. It also contains a discussion of to what extent the student complied with the plan of preparation for the master’s thesis, the frequency of consultations, the diligence of the student in working on the thesis, the degree of the student’s independence in working on the thesis, the creative approach of the student and the extent of the thesis’s compliance with the requirements for the master’s thesis. [↑](#footnote-ref-1)