MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY «KHARKIV POLYTECHNIC INSTITUTE»

Department of Management

A MANUAL FOR MASTER'S THESIS PREPARATION (THE STRUCTURE AND FORMATTING REQUIREMENTS)

for students pursuing a master's degree in "073 Management" within the educational and professional program «Business Administration», «Management of organizations and administration», «International Business»

Затверджено на засіданні кафедри менеджменту

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Методичні рекомендації з оформлення пояснювальної записки до дипломної роботи магістра (вимоги до структури, змісту і форматування) / укл. О.В. Прохоренко, О.М. Нащекіна, В.І. Ковшик, Н.М. Солопун — Х.: НТУ «ХПІ», $2024.-45~\mathrm{c}.$

Наведені основні вимоги до оформлення пояснювальної записки до дипломної роботи магістра у відповідності до стандартів СТЗВО – $X\Pi I - 2.01$ -2021 ССОНП і СТЗВО- $X\Pi I$ -3.01-2021 ССОНП, зокрема, вимоги до структури роботи, її змісту, оформлення окремих складових роботи, структурних елементів тексту, посилань і додатків.

Рекомендовано для іноземних студентів, що навчаються в магістратурі за спеціальністю «073 Менеджмент».

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INTRODUCTION

The purpose of this manual is to provide students pursuing a master's degree in Management with recommendations for the writing of a master's thesis.

Writing a master's thesis is the final stage and an essential component of the master's degree studies. A master's thesis is the result of a research project independently conducted by the student under the supervision of a faculty member. According to the academic curriculum, the preparation of master's thesis requires approximately 450 hours of work and is worth 15 ECTS credits.

The objectives of writing the thesis are

- to put into practice theories and concepts learned within the master's degree program;
 - to provide an opportunity to study a particular topic in depth;
- to develop the student's skills related to planning and managing a research project independently.

In the process of working on the thesis, a student should demonstrate the following:

- awareness and understanding of current research in the field of study;
- ability to plan a research activity;
- knowledge and motivation to carry out the planned research activity;
- ability to formulate a clear research problem that fits within the field of business administration and has a managerial and scientific relevance;
 - ability to formulate research goals and specific research tasks;
- ability to present the problem through a theoretically relevant perspective.
 This can be demonstrated through a critical evaluation of theories and/or models drawn from various literature sources and development/selection of an appropriate theoretical framework for own research:
- ability to study the problem by using an empirical approach, i.e. to collect, process and analyze empirical data;
- ability to critically analyze different aspects of real-world companies'
 performances using both qualitative and quantitative data;
 - ability to analyze the external environment in which the company operates;
- ability to draw reasonable and unequivocal conclusions based on the data collected;
- ability to identify shortcomings in the company's activities and develop practical recommendations regarding the improvement of the company operations.
 The recommendations should be comprehensive, detailed, relevant, and realistic;

- ability to describe and summarize the research work in the form of a well-written, properly organized thesis;
- ability to present and defend the results of the work in front of the Examination Board.

A thesis should be prepared in accordance with the university's standards and requirements for a Master's thesis concerning its structure, contents, size and formatting.

The manual lays out the requirements for the manuscript structure and content and provides instructions for the manuscript formatting (font type, font style, font size, spacing etc.). The manual is based on two standards developed at National technical university "Kharkiv polytechnic institute": CT3BO – X Π I – 2.01-2021 CCOH Π i CT3BO-X Π I-3.01-2021 CCOH Π (in Ukrainian). It is not meant to be an exhaustive guide for the thesis manuscript formatting but it covers the most important issues and provides examples of the formatting of structural elements of the manuscript.

The manual also describes the organizational issues related to the thesis submission and approval, the defense procedure and evaluation criteria.

1 ASSIGNMENT OF THE THESIS SUPERVISOR AND SELECTION OF RESEARCH TOPIC

Each master's student is assigned a qualified academic supervisor with whom s/he can discuss the research topic, research methodology and other aspects of the research project.

A student can expect 30 hours of supervision from the academic supervisor. These hours include all offline, if any, and online meetings with the supervisor, the supervisor's reading time of all drafts during the research project, the supervisor's time spent on correspondence with the student and providing written feedback.

The topics of master's theses should be related to the business administration field with a significant focus on management and fall within the research expertise of the faculty members of the Management Department.

Specifically, the topics of theses can be related to the following areas, but not limited to them: Strategic Management, Marketing Management, Production Management, Investment Management, Innovation Management, Human Resource Management; Purchasing and Supply Management, Logistics Management, Business Information Management; Change Management, Corporate Social Responsibility, Organizational Culture.

The master's thesis should include both academic and practical aspects, the

practical part being based on the activities of a certain organization. The choice of the organization should take into account the orientation of the educational program. Characteristics of organizations that can serve as objects of analysis in a master's thesis in different educational programs are given in Table 1.1.

Table 1.1 – Types of organizations that can be chosen for analysis in a master's thesis depending on the educational program

Educational program	Organizations		
Management of	A wide range of organizations, for-profit and non-profit: enterprises,		
organizations and	companies, institutions, public associations, etc.		
administration			
Business administration	Business organizations: enterprises, companies, associations,		
	financial institutions, etc.		
International business	Business organizations that engage in international business, conduct		
	foreign economic activities, or are planning to start such activities		

The topic of the master's thesis should reflect the functional area of management to be studied and, desirably, narrower aspects that will be addressed in the thesis. In addition, a type of a company or industry can be specified. One of the main criteria for choosing a research topic is its academic and practical relevance to the field of management.

The topics of master's theses should be aligned with the research interests of the faculty members of the Management department, the current trends in the industry and academic research in the field of management and also reflect the focus of the educational program.

The topic should be formulated clearly, concisely and should lend itself to an unambiguous interpretation.

The recommended (but not exhaustive) list of research areas for the educational programs and examples of the thesis topics within each area are given in Appendix A.

At the beginning of the last semester of the study in the corresponding program, a master's student together with the academic supervisor chooses the topic of the thesis and gets approval of the topic from the guarantor of the educational program. After that, the student writes a request for the official approval of the topic to the Head of the Management department.

The possible reasons for rejection of a topic and the revision request are:

- 1) the topic is not relevant;
- 2) the topic or its wording do not correspond to the "Management" specialty;
- 3) the topic does not correspond to the educational program.

After the topics of theses and the assignment of thesis supervisors are approved by the Head of the Management department, they are ultimately endorsed by the Rector's order. After the order is issued, the topic of the work cannot be changed.

2 IMPORTANT DEADLINES

There is no exact date of commencement of the work on the master's thesis, however students are encouraged to start planning their research project in the first semester of their studies within the master's program.

Master's students should submit an application requesting the official approval of the research topic during the first week of the third (last) semester of their study within the program.

Three weeks prior to the defense date, a department meeting with the master's students is held. During this meeting, the students present the drafts of their thesis manuscripts, and the Head of the Management department and other faculty members collectively assess the students' progress and the quality of their manuscripts, give recommendations as to what else should be done or changed to improve the thesis quality.

After the manuscript is approved at the assessment meeting, the student should finalize the thesis.

When planning their work on the master's thesis, students should allow extra time for compliance with formalities related to

- getting the academic supervisor's approval of the thesis- signature on the title pages and the supervisor's written opinion (at least two weeks prior to the defensedate);
- checking the thesis for plagiarism (at least two weeks prior to the defense date);
- checking the thesis for meeting the technical (formatting) requirements (at least one week prior to the defense date);
- getting an independent evaluation (opinion) of the thesis from an assigned external reviewer (at least one week prior to the defense date);
- getting the approval of the thesis by the Head of the Management department (at least four days prior to the defense date);
- depositing an electronic copy of the final version of the master's thesis into the university's digital repository (at least two days before the defense date);
- preparing an oral presentation of the results (a talk and a PowerPoint presentation) for the defense (at least two days before the defense date).

3 THE STRUCTURE AND CONTENT OF THE MASTER'S THESIS

According to the National technical university "Kharkiv polytechnic institute" standard CT3BO-XIII-2.01-2021, a master's thesis consists of the following elements:

- Title page;
- Descriptive abstract;
- Table of contents;
- List of abbreviations (if necessary);
- Introduction;
- Main body text;
- Conclusions:
- List of references;
- Appendices (if necessary).

The title page is the first page of the thesis. It is included into the total page count but is not numbered.

Descriptive abstract contains the description of the object and subject matter of the research, the purpose of the work, the research methods and the results of thework. The descriptive abstract page is neither numbered nor counted.

The contents page lists the structural elements of the thesis in the following order: introduction, chapter and section headings, conclusions, the reference list, and appendices with their titles.

In the **Introduction** it is necessary

- to state the research problem, justify its importance and relevance from both academic and practical points of view;
- to comment on how extensively/intensively the problem has been studied and what aspects of the problem remain unclear and call for further studies;
 - to define the object and subject matter of the study;
- to formulate the goal (purpose) and specific tasks of the study. The tasks of the study outline the particular issues that will be addressed in order to achieve the research goal;
 - to name the research methods used in the study;
- to clearly specify the elements of *scientific novelty* of the results obtained in thework:
- to justify the practical importance of the propositions and recommendations developed in the work and potential for their implementation;
- to indicate in which ways the results of the study have been presented to the scientific community.

<u>Research problem</u> is a set of scientific and practical tasks that must be accomplished. <u>The topic of research</u> is a constituent part of the problem, one of the problem aspects. The problem and topic of research should be of interest both from the scientific and practical points of view.

In the introduction, the student can specify the names of scholars who made a significant contribution to the field, identify the gaps in the existing knowledge, controversial results and views.

Every scientific study has its research object and subject matter, which are related to each other as a whole (object) and its part (subject matter).

The object of research is a fragment of reality – a process or phenomenon, with which the problem situation to be studied is associated. The subject matter is a property, a constituent, an aspect, a relationship, regularities of the functioning and/or development, theoretical and/or methodological aspects of study of the object, on which the research is focused. Defining the subject matter of research, one sets the boundaries of scientific inquiry.

For example, the object of research is the process of developing an investment strategy of a construction company and the subject matter is methodological principles and practical recommendations as to the development of an investment strategy for a construction company. Another example: the object of research is the marketing management of a food company and the subject matter is theoretical and methodological approaches to developing a marketing mix for a food processing company.

Research goals are related to the object and subject matter of research and should reflect the results that are expected at the end of the research project. One should not formulate the research goals as for example "to study the problems of personnel motivation..." because it reflects a process rather than a result.

Research goals can be defined, for example, in the following way: to systematize theoretical views and develop practical recommendations as to the enhancement of the operational efficiency of the company.

To show how the research goals will be accomplished, the student should formulate <u>research tasks</u>, which, for example, may include:

- reviewing literature / studying theoretical foundations / exploring the theoretical framework...;
- performing the industry analysis (analysis of competition / market analysis /strategic analysis...);
- assessing the company performances (financial situation / marketing activities /competitiveness...),
 - developing recommendations (propositions / an investment project /

advertising campaign...),

- assessing the project feasibility (economic viability of the project).

In the introduction, the student should also indicate what research methods were used.

Research methods are specific ways, procedures or instruments that are used for acquiring a new theoretical or empirical knowledge about the reality. There are general research methods – those that are used in scientific research universally, i.e. shared by all or the majority of sciences (e.g. abstraction, analysis and synthesis, induction and deduction, analogy, observation, experiment), and specific research methods which are used in individual sciences or in a number of related sciences (e.g. survey, expert methods, methods of financial analysis, case study method).

Recommendations regarding formulating scientific novelty of the results will be given in Section 4.

In the Introduction one should also comment on the importance of the results obtained in the work from the practical point of view. For example, one can indicate that the developed project can be implemented in the company for which it was proposed or, more generally, the developed recommendations can be universally used by companies that belong to the industry considered in the thesis, to improve their performances, efficiency, competitiveness and so on.

Finally, the student should indicate how the results of the study were communicated. If the student participated in scientific conferences, it is necessary to specify the conference names as well as when and where they were held. If the student published a scientific paper, then it is necessary to specify the title of the paper and the journal title(s).

The Introduction section should not exceed three pages.

The main body of the text consists of three chapters:

- 1) a review of theoretical and methodological issues related to the research topic;
- 2) an empirical study of the research object (case study);
- 3) the development of recommendations for managing/improving the research object and justification of their economic feasibility.

The chapters should be divided into sections (no more than three within each chapter).

The content of chapters and sections depends on the topic of the master's thesis, its goal and tasks. A master's thesis is a comprehensive research project, all its chapters represent parts of a coherent whole, i.e. are interrelated and logically interconnected. Each of the three chapters should have a conclusion – one- or two-paragraph long summary of the most important points and/or results of the chapter.

<u>The first chapter of the master's thesis</u> provides a theoretical background of the study and outlines the methodological framework.

In the first chapter, it is important to carefully define all key concepts that are related to the research problem in order to avoid any ambiguity in their interpretation. Sometimes it is useful to compare definitions of the key concepts given by different scholars, to systemize and critically assess them. After that, for each of the key concepts, the student can either choose one of the existing definitions, which best corresponds to the research purposes, or refine some definition or suggest own definition.

The first chapter should also contain an overview of existing theories, views, ideas etc. The literature review should reflect the major stages or milestones in the development of scientific ideas in the corresponding research area. Note that it is not enough to describe/state the existing views and ideas, e.g. "According to X, ..." or "Ybelieves that ,..." or "In Z's opinion, ...". The literature review should contain a juxtaposition, critical analysis, and systematization of different points of view, theories, models, classifications, opinions etc. The student should identify controversial issues related to the research problem and express his/her own opinion.

It is mandatory that the newest theories, views, models be reflected in the theoretical overview. If necessary, the student can refer to classical works that were published in a distant past but this should be done in the context of a chronological overview of the scientific views development in the field.

In the first chapter the student also describes methodological framework. Methodology can be understood in a broad and in a narrow sense.

In a broad sense, methodology refers to our perception of the research object, i.e. which of the existing models of the research object we use, what conceptual framework we apply in the research, etc. General methodology represents the lens through which we view the research object. For example, in a research project related to marketing management the student may choose the 4P marketing mix model as a framework for analyzing the marketing activities of the company and developing recommendations. Questions related to general methodology are basically addressed in the theoretical review.

In a narrow sense, methodology comprises specific methods, procedures, approaches to studying phenomena in question. The methods that are used in the work should be carefully described. Depending on the research topic, the student can perform comparative assessment of different research methods: methods of data collection, data analysis tools, techniques for assessing certain characteristics of objects and phenomena, approaches to computing or measuring certain performance metrics or constructing composite indicators, etc. After such comparative analysis,

the student can either select one of the existing techniques best suited to the research purposes, or refine some technique, or develop a new technique.

The most important sources of information to be used in the first chapter are academic books, articles in scientific periodicals (journals), collected editions, conference proceedings etc. Textbooks are not regarded as primary sources of information and should be used only limitedly. They can be a good source of general information but they do not contain the original data and usually do not reflect the most recent achievements in the research field.

Whenever someone else's ideas, data, figures or text are mentioned or used in the thesis, they should be properly cited.

It is important that different forms of presenting information be integrated into the text, including tables, schemes, graphs, etc. It helps not only visualize but also systemize information.

At the end of the chapter, it is necessary to summarize the major points discussed and make conclusions.

<u>In the second chapter of the master's thesis</u> the research questions are addressed using empirical qualitative and quantitative data for a particular company and industry.

Chapter 2 consists of three sections. In the first section, the student analyzes the industry in which the selected company operates. Specifically, the student should assess the current situation in the industry and identify the trends in the industry development. Depending on the topic of the thesis, students can analyze the dynamics and structure of production in the industry, total market size, the market shares of key players, the character of competition, the competitiveness factors, key success factors and the driving forces of the industry development, government regulation of the industry and so on. The student should provide statistical data for several recent years with references to the data sources.

The second section of Chapter 2 should contain basic information about the company selected for analysis, including information about the company's current activities, the history of the company development, the form of ownership, the number of employees, geographical presence, major performance indicators, etc. When giving a general description of the company, one should avoid copying text from the company website or the company charter.

In the third section of Chapter 2, the student should analyze those aspects of the company activities and performances that are related to the research topic. Depending on the topic, the student may decide to analyze the company's financial situation, organizational structure, marketing activities, innovation or investment activities, some aspects of human resource management, to assess the company competitiveness, to perform strategic analysis and so on.

It is not enough to present quantitative data in tables or graphs without any comments. It is even insufficient to describe data in the text (e.g. "As seen in figure 1, the company's sales reached \$170 mln in 2022 and then dropped to \$120 mln in 2023). It is necessary to analyze and interpret the data, for example to explain why a certain performance indicator fluctuates or dramatically increases or steadily falls over time. Analyzing data, one should identify trends, reveal regularities and cause and effect relationships.

In the second chapter, the student can work both with primary and secondary data. Primary data are those collected by the student him/herself for the purposes of the master's research project (e.g. employee surveys). Secondary data are data that were gathered and recorded by someone else prior to (and for the purposes other than) the research project (e.g. the company financial statements, sales data). If primary data are collected, the student should provide a detailed description of the data collection methodology.

In the absence of objective statistical data, a student can seek expert opinions, for example, when assessing the company competitiveness. If expert methods are used in the work, they should be appropriately described. In particular, it is necessary to indicate who the experts were, what criteria were used for evaluation, what were the weights of individual criteria, etc.

The chapter ends with short conclusions summarizing the main findings.

The third chapter of the master's thesis contains the student's propositions and recommendations as to the improvements in management practices aimed at enhancing organizational performance, effectiveness and efficiency of the company working in the industry described in Chapter 2. The propositions should be based on the results of the analysis performed, i.e. take into account the identified trends, opportunities and obstacles to the development of companies within the industry. These general recommendations can represent a list of areas or directions for improvement with corresponding justifications, new or refined business models, management methods, etc.

The feasibility and practicality of the recommendations for the company should be demonstrated. Thus, apart from developing general recommendations, the student should suggest a specific project (measures or activities) that can be implemented in the selected company. The description of the project (measures) should be as comprehensive as possible and address all relevant issues related to its implementation, i.e. a detailed implementation plan should be developed.

It is mandatory to provide a thorough justification of the propositions (to do a feasibility study). For this purpose, the student should estimate the costs of implementing the propositions. Then, depending on the character of the propositions, it might be necessary to make forecasts of the future sales, market share

and other performance indicators, to provide financial feasibility assessment for investment projects, to calculate a break-even point for new products or types of activity, to forecast changes in the company or product competitiveness, to estimate other expected results, including possible social impact. The student should compare the estimated costs and projected results and make a conclusion whether the implementation of the recommendations would be justified.

<u>In the conclusions</u> the student should summarize the most important scientific and practical results, research findings and developed propositions, indicate the prospects for future research on the problem. The conclusions should be written logically, should not contain data or facts that have not been mentioned in the main body of the text. The conclusions should be consistent with the goal and tasks of the thesis formulated in the introduction.

The conclusions section should not describe what was done by the student but contain meaningful results, i.e. show what new knowledge was obtained by the student, what inferences he/she made after performing literature review, empirical data analysis and calculations of various performance indicators.

The length of the conclusions section should not exceed three pages.

<u>The list of references</u> should contain only those sources that were cited in the thesis.

<u>Appendices</u> may contain financial statements, detailed tables, questionnaires used in the work, supplementary material, etc.

An electronic copy of the thesis prepared as a PDF-file should additionally include the following items that appear before the thesis itself:

- 1) the cover page (not to be confused with the title page of the thesis, which is placed after these three items!);
 - 2) the list of documents related to the thesis;
- 3) the specification of the thesis tasks, input data, thesis structure and thesis writing schedule.

There are standard forms for these three items as well as for the title page of the thesis. The forms are to be completed in Ukrainian with the help of the supervisor.

The PDF-file will be sent to the university's repository and stored there.

Separately from the file with the thesis, students should provide electronic versions of their publications on the topic of the thesis. The publications may include articles in scientific periodicals or other academic editions and abstracts of the presentations at scientific conferences published in the conference abstract books or proceedings. Students should provide not only the texts of publications but also copies of the first two (title) pages of the volumes in which they were published.

In case an article has been accepted for publication but has not been published yet, the student should provide the manuscript of the article and a copy of the manuscript acceptance letter from the editorial office.

4. NOVELTY OF SCIENTIFIC RESULTS

Since the master's thesis is a research project, it should contain novel scientific results. The novelty of scientific results may consist in:

- -introducing a new concept;
- -refining the existing definitions of a known concept or suggesting an alternative definition (be sure to make a meaningful contribution to refining or changing of a definition);
- refining / modifying the existing research / assessment / analysis methods or suggesting new ones;
- -revealing / establishing cause-and-effect relationships between phenomena, regularities in the observed processes, peculiarities of the market behavior of economic agents or organizations;
- -developing a new model that describes a process or phenomenon, the behavior of or relations between economic agents, refining the existing models or adaptingthem to new conditions;
- -suggesting a classification / typology of models, methods, phenomena, strategies of organizations, etc. or refining the existing classifications;
 - systemizing views, ideas, concepts, etc..

When describing the novel results, one can use the following expressions:

- a classification ... is proposed;
- $-a \mod 1 \dots$ is developed (refined, modified);
- a method.... is suggested (developed, refined, modified);
- −a new conceptis introduced;
- the definition of a concept.... is refined.

It is also important to specify what distinguishes a new/modified model, method, classification, etc. from the existing ones.

5 THE ACADEMIC STYLE OF WRITING

The master's thesis should be written using the academic style of writing. The specificity of this style is determined, on the one hand, by the goals of scientific communication – to clearly and unambiguously state facts and explain them, convey complex ideas and concepts, and, on the other hand, by the characteristics of the target audience – scientific community. This audience represents professionals, who

are qualified enough to understand scientific information and do not need extra incentive to get interested in scientific messages.

The main characteristics of the academic style of writing are

- 1) an extensive use of terminology;
- 2) a logical ordering of information (authors tend to move from general to specific);
 - 3) clarity and unambiguity;
 - 4) precise word choice;
 - 5) conciseness;
 - 6) formal tone;
 - 7) consistency in style;
 - 8) the use of the third-person rather than first-person perspective.

6 PLAGIARISM

Plagiarism refers to the practice when a person uses the idea, data or text of others as though they were his/her own. Plagiarism is a form of cheating. Ethical academic writing assumes giving proper references to the work of others. The thesis must represent the student's own results and be written by the student him/herself. If the students, when doing their research, draw on someone else's theories, models, views, ideas, data, etc., all the sources must be properly cited.

Students should be aware that special software will be used to detect plagiarism in the thesis. Students whose plagiarism will be exposed will be penalized. In the mostsevere cases, they will not be allowed to defend their theses and thus will not be awarded the degree.

7 GENERAL FORMATTING REQUIREMENTS

The manuscript should be typed on A4 size paper (297 mm \times 210 mm) with the left, top and bottom margins of at least 20 mm and the right margin of at least 10 mm. The right margin should be justified.

The font Times New Roman is recommended for all elements of the text including table and figure captions, footnotes and citations. The font size is 14 pts. Font type and font size should be consistent throughout the text. Smaller font size (12 pts) may be appropriate for some elements of the text, such as tables, footnotes, etc.

The 1 ½ line spacing should be used throughout the text with no extra space between paragraphs.

The page numbers in Arabic numerals should be located in the upper right corner of the page. The first page is the title page of the manuscript. It counts but is not numbered.

The first line of a paragraph should be indented 1 cm. The indentation should be consistent throughout the text.

Paragraphs ending pages of text should contain at least two lines of text. Otherwise, they should be moved to the top of the following page.

New pages of text should not begin with the last line of a paragraph carried over from the previous page but contain at least two lines of the paragraph that starts on the previous page.

Formatting requirements for specific elements of text, such as chapter titles, subtitles, tables, equations, figures, references, and appendices will be described in Section 8.

8 INSTRUCTIONS FOR THE PREPARATION OF STRUCTURAL COMPONENTS OF THESIS MANUSCRIPT

8.1 Title page

There is a standard form of the title page available as an electronic template. This form should be completed in Ukrainian with the help of the thesis supervisor (Appendix E).

8.2 Abstract

The abstract provides a description and overview of the thesis. It contains three structural elements:

- 1) information about the size of the manuscript;
- 2) list of keywords;
- 3) summary of the work.

The information about the size of the manuscript includes the total numbers of pages, figures, tables, references and appendices.

The list of keywords should reflect the topic and content of the thesis and contain from 5 to 15 words or short phrases.

A short summary of the work should include the statements of research goals, object and subject matter of the study, the list of research methods used in the work, a description of what was done and what results were obtained.

The structural elements of the abstract should be separated from each other by a single-spaced blank line. The abstract size should not exceed one page.

The abstract should be provided in English and Ukrainian.

The pages of the abstract are not numbered and are not included in the total page count. A sample abstract is given in Appendix B.

8.3 **Table of contents**

Table of contents should include the following entries:

- list of symbols and abbreviations (if applicable);
- introduction;
- the titles of chapters and subchapters in the main body of the text;
- conclusions:
- list of references;
- appendices (if applicable).

Abstracts are not listed in Table of contents.

The instructions for formatting Table of contents are provided below.

- 1 The heading **TABLE OF CONTENTS** should be typed in capital letters, in bold font, at the top margin and centered.
 - 2 One single-spaced line should be left between the heading and the first entry.
 - 3 In the rest of Table of contents, a 1 ½ line spacing should be used.
- 4 All entries (except for the headings of subchapters) should be aligned with the left margin.
- 5 The headings of subchapters should start under the textual part (not the number!) of the chapter heading.
- 6 If a heading takes up more than one line, it should be broken up about three-fourths of the way across the page and the rest should be typed on the next line and aligned with the beginning of the textual part (not the number!) of the heading on the previous line.

7 Page numbers listed in the Table of contents should line up on the right margin with leaders (series of periods) filling out the space between the end of the heading and the page number.

A sample Table of contents is given in Appendix C.

8.4 Introduction

Introduction should not exceed three pages. It is not divided into subsections and does not contain figures or tables.

8.5 Main body of the text

Main body of the thesis manuscript consists of three chapters. The chapters in turn should be divided into three subchapters.

Schematically the structure of the main part of a thesis is shown in Figure 8.1.

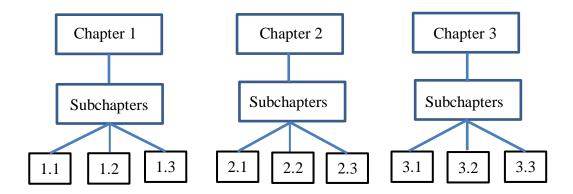


Figure 8.1 – Structural elements of the main part of a thesis and their numbering

Chapters and subchapters should have headings and be numbered using Arabic numerals. No period is placed at the end of the heading as well as at the end of the number of the structural element.

The headings of chapters are typed in capital letters, in bold font and are centered. One single-spaced line should be left between the heading of a chapter and the heading of a subchapter.

The headings of subchapters are typed in bold face (except for the subchapter number, which is typed in regular typeface), the first letter of the first word is capitalized. The heading should be indented 1 cm from the left margin.

If the heading of a subchapter is longer than one line, it is continued on the second line from the left margin without indent.

The spacing between the heading of a subchapter and the following text is the same as in the text, i.e. $1\frac{1}{2}$.

One blank line should be left between the end of the previous subchapter and the heading of the next one.

It is recommended that a new chapter be started on a new page.

If the headings of chapters and subchapters are placed at the bottom of the page, they should be followed by at least two lines of text on that page.

Refer to Appendix D for examples of heading formatting.

8.6 Special elements of the text

8.6.1 Equations

Equations are placed on a separate line and centered. One blank line should be left before and after the line with an equation. After the equation, a comma should be placed.

The explanation of quantities and coefficients that enter an equation, if they were not introduced earlier in the text, should start on the next line after the equation with the word "where". The explanation of each quantity should start on a new line and end with a semicolon. The last explanation ends with a period.

At the end of the explanation of a quantity, one should indicate the units of measurement, if any, after a comma. For constant quantities, the value should be given.

The line spacing between an equation and the explanation as well as between the explanation and the following text should be the same as in the text $(1 \frac{1}{2})$.

The main equations to which the author of a thesis refers should be numbered. The first part of the equation number is the number of the chapter, the second part, separated by a period, is the consecutive number of the equation within this chapter. The number of an equation is placed at the right margin of the line with the equation and contained in round brackets.

A sample equation (8.1) is given below.

$$NPV = \sum_{t=1}^{n} \frac{CF_t}{(1+i)^t},$$
 (8.1)

where *NPV* is the net present value of future cash flows, USD;

 CF_t is the cash flow in time period t, USD;

n is the total number of time periods;

i is the discount rate.

8.6.2 Tables

Tables are convenient tools of presenting information in a structured and ordered way. All tables should be referred to in the text. A table can be placed immediately below the text in which it is referred to, on a separate page or in an Appendix.

Tables should have captions and be numbered.

The table caption starts after a 1 cm paragraph indent with the word "Table" followed by the table number, a space, en-dash, another space and then the title of the table. The number of a table consists of two parts separated by a period: the first designating the chapter in which it appears and the second indicating the consecutive number of the table in that chapter.

The table caption is placed above the table. If the table title is longer than one line, it is continued on the next line and starts right under the table title (not number!) on the first line. It is recommended that a blank line be left before and after a table.

The font size inside tables can be smaller than 14 pt (e.g. 12 pt).

The height of rows in a table should not be less than 8 mm.

A table can be continued on the next page(s). In this case, on the page where the table starts, in the row immediately below the table header, one should assign numbers to the columns.

At the top of the next page, after a paragraph indent one should type "Continuation of Table ..." or "End of Table....", depending on whether the table ends on this page or is still to be continued on the next one. Instead of reproducing the header of the table on the next page(s), one should indicate the corresponding numbers of columns in the first row.

Table 8.1 is a sample of table formatting.

Table 8.1 – Positions of Nestle Global in international CSR-related rankings in 2021and 2022 (compiled on the basis of [87])

Rankings where listed	Organization that	Position of Nestle Global	
	produces ranking 2021 2022		2022
1	2	3	4
Brands Most Criticized by	Sigwatch	4	1
Activist Groups			
Brands Most Praised by Activist	Sigwatch	9	2
Groups			
Sustainable Brand Index in the	Sustainable Brand		90
Netherlands	Index		
The Brand Footprint Global	Kantar Worldpanel	13	15
Ranking Top 50			
The World's Top 50 Most	Universum	31	34
Attractive Employers			
Global 100 Most Sustainable	Corporate Knights	50	
Corporations			
Global CR RepTrak 100	RepTrak	89	
	(Reputation		
	Institute)		

8.6.3 Figures

All figures should be referred to in the text before them. A figure is placed after it is mentioned in the text for the first time, but not necessarily immediately after mentioning it.

Figures should be numbered. The number of a figure includes the chapter number and the consecutive number of the figure in that chapter separated by a period.

The figure caption should be placed under the figure and centered. The figure caption starts with the word "Figure" followed by the figure number, a space, endash, another space and then the name of the figure.

It is recommended that one blank line be left between a figure and the text before and after the figure.

If a figure is based on the information from another source, the reference to that source should be provided in square brackets.

Figures should be of good quality and clearly readable.

The sample figure 8.2 shows how a figure should be placed in the text and how a figure caption should be formatted.

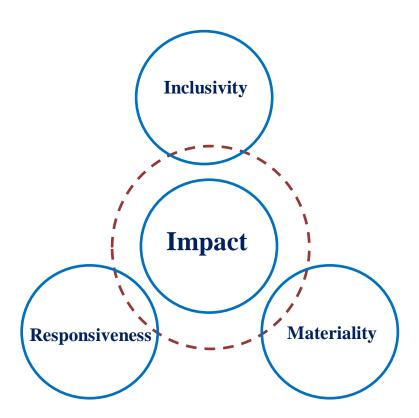


Figure 8.2 – AA1000 AccountAbility Principles [51]

8.7 Conclusions

Conclusions are placed at the end of the main body of the text. They should start on a new page and be one- to two-page long.

8.8 Appendices

Appendices contain supplementary materials which are either too large to be placed in the main body of text (e.g. detailed data tables) or provide illustrations of secondary importance.

Appendices are placed at the end of the thesis after the list of references.

The word "APPENDIX" is capitalized, typed in bold font and centered at the top of the page. Appendices are labeled with capital letters (A, B...) consecutively in alphabetical order.

An appendix should have a heading, which is placed under the label and centered. One blank line should be left between the label and the heading. The heading is typed lower case, with the first letter capitalized, in bold font.

All appendices should be referred to in the main body of text.

9 CITATIONS AND REFERENCES

In writing scientific and educational papers, it is important to reference all sources properly to avoid using information without acknowledgment of its author and original publication. These references must be consistent and include necessary components that allow identifying the source among millions of existing scientific papers, books, or web pages.

One of the common problems students face during their thesis preparation is using proper in-text citation and reference styles. In scientific articles and books, it is possible to see bibliographies and references formatted in different ways. Usually, they contain the same elements (authors, title, publication year, etc.) but in a different order and use different delimiters (commas, periods, slashes, dashes, parentheses, etc.). These styles are established by publishers and journal guidelines or local standards. It is crucial, in the writing of a new paper, to avoid mixing several citation styles. So, it is impossible to directly copy bibliographical descriptions from journal websites, book covers, repository pages, or Google Scholar.

According to the local standards for preparation of scientific and educational works at NTU "KhPI," students have to use the State standard of Ukraine DSTU 8302:2015 "Information and documentation. Bibliographic references. General requirements and rules of composition" (ДСТУ 8302:2015). It is based on the previous standard (DSTU GOST 7.1:2006) and contains some significant simplifications that allow creating more readable references, similar to the examples of common international citation styles.

The following information and examples cover the basics of using the standard for bibliographies preparation in student papers and describe the simplest form of references. For the complete details and possible options in the bibliographies formatting, please refer to the original standards.

Citations in the text. In the text, whenever any information from an external source appears (in direct or indirect form), it must be accompanied by a reference to the source. According to the standard, since the thesis papers obligatorily include the section with a numbered list of references, the in-text citations do not include any source properties, like author names. They indicate only the index number of the source in the list.

The numbers are placed in square brackets "[]" and can be separated by a semicolon ";" if it is necessary to mention multiple works of the same author or several different sources supporting some fact or statement. If the reference relates to the source of a list of items, it is recommended to place it before the list, after the introductory phrase.

"This concept was investigated in the works by M. Johnson [1], J. Smith [2], and W. Addams [3; 4] ..."

- "... created by the author on the basis of [5]"
- "... as mentioned in some papers [6; 7; 10], this is ..."

Referring to a specific statement, definition, or fact mentioned in a large document, it is possible to include a page number separated with a comma "," and using the abbreviation "p." (in Ukrainian – "c."):

```
"M. Porter defines this concept as ... [3, p. 231]"
```

Numbers are assigned to the bibliography items in the order of their appearance in the text. In the case of repeating the reference, it is required to use the same number.

List of references. The list of references is placed as a separate section, after the main body of the thesis, according to the general requirements and guidelines. All items in the list start from the new line and are numbered using numbers without dots or other delimiters except for space or tabulation symbol:

1 Kaplan R. S., Norton D. P. The Balanced Scorecard: Translating Strategy into Action. Brighton: Harvard Business Review Press, 1996. 348 p.

[&]quot;Modern management trends include the following [4]: ..."

[&]quot;... later confirmed by other researchers [17, p. 65]."

- 2 Lambert D. M., Cooper M. C. Issues in Supply Chain Management. Industrial Marketing Management. 2000. Vol. 29, No. 1. P. 65–83.
- 3 Stadtler, H. Supply Chain Management and Advanced Planning: Heidelberg: Springer-Verlag, 2005. 558 p.

The general principle of creating the bibliographical description of an information source is to provide all necessary information in the following order:

- authors;
- work title;
- information about publication (e.g., journal) or a parent item (e.g., book) the work is a part of (if applicable);
- specific information about the publication: book's publisher, journal's issue or volume number, etc.
 - physical characteristics: number of pages, web page URL, etc.

Formatting of references to the specific types of sources. The components of the bibliographical description are different for the different types of publications. The examples provided in this section illustrate how to format the most popular sources: books, book chapters, scientific journal articles, conference papers, web resources. Other resources can usually be cited as these types.

For example, company annual reports can be cited as books if they contain information that they were printed, or as internet resources if published online without all properties of a printed book. Similarly, newspapers are periodical publications like scientific journals, but they usually have online versions, so it is possible to choose the citation style as both types of references describe the source properly.

Proceedings of conferences (abstracts) are referenced as book chapters with an indication of the date and place of the conference.

Laws and normative documents can be referenced as official publications in the parliament's newspapers (e.g., Відомості Верховної Ради України) or as online resources.

For scientific articles, it is preferable to describe them as journal publications, even if they are available online. Their description may be accompanied by an optional URL or a DOI identifier if it is known.

The descriptions of the sources have to be formed using the language of the sources, and it is not needed to translate or translaterate titles, author names, etc.

Books. A typical bibliographical description of a book contains elements in four blocks (fig. 1): authors (shown here as blue area¹), book title (green), publication details (yellow), physical properties (orange).

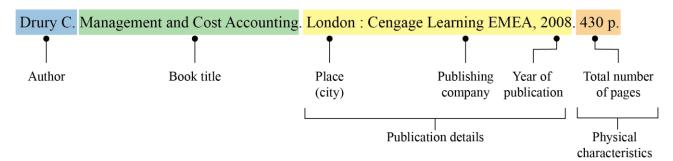


Figure 9.1 – Typical reference to a book

Blocks are separated with a period ".", excluding the cases if the block's content ends with a period. For example, the author's initials end with a period, so the second period is unnecessary.

Author names consist of the last name and initials separated with a space. Multiple authors are listed in the same order as in the source, separated by commas ",". Usually, up to three authors are listed. If necessary, according to the latest standard, it is possible to include more than three authors or to use abbreviation "et al." (Latin for "and others") or Ukrainian "Ta iH.".

Kotler P.

Christopher M. O., Kwasira J.

Kaplan R. S., Norton D. P.

Kreinovich V., Quintana C., Lea R., et al.

If it is important, the book title may optionally contain a book type (textbook, monograph, instruction manual, etc.), separated by a colon with spaces around ":".

Inventory Analytics: monograph.

Logistics and Supply Chain Management: textbook.

In the information about the publisher, the location and company's name are separated using a colon with spaces ":". The information about the publisher may be written using only the company name without the location or the location without the company name if one of them is not provided on the book cover. For example, it is

¹ Colors here are used for the convenience of reference structure understanding and are not used in documents!

common in the case of international publishing houses or electronic books. Year of publication is an obligatory item.

Physical properties of the book may include not only the total number of pages but also the volume number ("Vol.", or Ukrainian "T."). Different properties are separated with a period as usual blocks.

Vol. 5. 235 p. 188 p. Vol. 3. 480 p.

Some books were written by too many authors or are just compilations of multiple works. For example, encyclopedias and dictionaries often mention only an editor or members of the editorial team. Descriptions of such books contain no authors block, but the book title is accompanied by so-called "information about responsibility". It is separated by a slash "/" symbol and usually contains an editor's name and role ("edited by", "ed. by", or in Ukrainian "за редакцією", "за ред."):

Management / edited by F. J. Smith. Information technologies in management / ed. by A. Cooper, H. Simpson

Book chapters. Book chapters are, basically, just a small piece in a larger publication that may have separate unique features. If the whole book is written by the same authors, use the book referencing described above. But if the chapter has different authors, it is worth mentioning that in the reference. In general, the description is similar to the book's one with several differences (fig. 9.2).

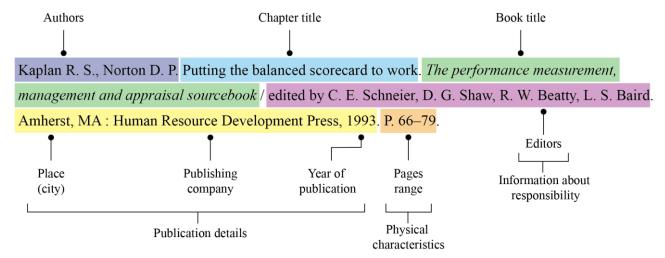


Figure 9.2 – Typical reference to a book chapter

The description of the book chapter has two title blocks: for the chapter title and for the book title. They are separated by a period, as usual. The title of the whole book can be written in italic font.

Manufacturing and logistics information systems. *Encyclopedia of Information Science and Technology*.

Performance management processes. *Managing Performance: Performance Management in Action.*

Also, the total number of pages is replaced with the corresponding pages range of the chapter with the capital letter "P." (Ukr. "C.") in front:

- P. 45-85.
- P. 1235-1321.

Often, a book chapter description can mention editors of the book too.

In case of reference to conference proceedings, it is important to indicate the type of publication (conference proceedings or as stated on the title page), as well as the place and date of the conference.

International Conference on Operations Management and Research : conference proceedings (Mysuru, India, January 21-22, 2016)

International MultiConference of Engineers and Computer Scientists: conference proceedings (Hong Kong, March 16-18, 2011)

Journal articles

Journal articles are prevalent sources of information for scientific and educational works. They are also parts of parent publications (journals, collections) and are formatted very similarly to book chapters (fig. 9.3).

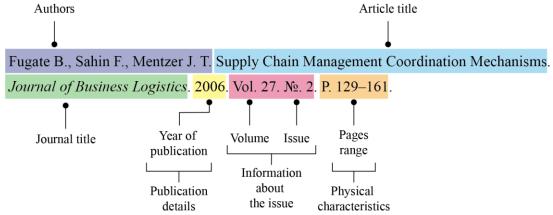


Figure 9.3 – Typical reference to a journal article

The difference is that there is no publishing company and place in the publication details block (only the year). Also, there is one more block with the issue number because journals are periodical publications. Issue numbers are formatted using a "No" symbol. Some journals also have a volume number that must be mentioned, similarly to the book volume.

It is possible to mention the DOI identifier of the article, if available, as the last block of the article's description.

```
2017. №1. P. 45–54.
2010. №10, Vol. 1. P.10–14.
2018. №2(14). P. 48–55. DOI: 10.25140/2410-9576-2018-2-2(14)-48-55
```

If an article is officially published online, it is possible to add URL information similarly to other internet resources (see below).

Internet resources

Many information sources for student papers are available today as internet resources: annual reports of companies, market research data, state statistics, e-books, etc. They also must be referenced in the bibliography properly.

The description of a webpage usually should contain the same elements that allow to clearly identify the resource as any other publication: authors, title, responsibility information, year.

Unfortunately, not all web resources provide information on authors or editors, so the descriptions should mention at least a title (fig. 9.4).

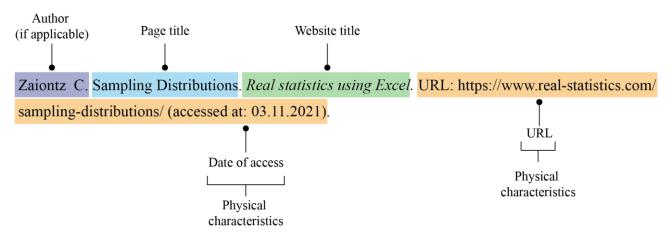


Figure 9.4 – Typical reference to an internet resource

It is possible to combine an article or blog post title with the website's title similarly to an article in a journal description.

Portfolio Management. Investopedia.

Annual reports. Inditex.

Technical analysis. Wikipedia, the free encyclopedia. 2021.

The obligatory element is the internet address, or the URL (Universal Resource Locator), that is added after the previous description blocks. After the URL, in parentheses "()", it is needed to mention the date when the resource was accessed because web pages can be changed. The formulation is "accessed at: ..." or "access date: ..." (Ukr. "дата звернення: "). Also, the URL section can be added after any other publication available online. Theoretically, any other resource type (book, article, law, conference paper, etc.) can be in electronic form on the internet.

URL: https://openstax.org/details/books/principles-management (accessed at: 22.11.2021)

URL: http://blogs.kpi.kharkov.ua/v2/vdik/ (accessed at: 10.09.2021)

URL: https://zakon.rada.gov.ua/laws/main/322-08 (дата звернення: 20.10.2021)

EXAMPLES OF VALID BIBLIOGRAPHICAL DESCRIPTIONS

Books

Kotler P., Pfoertsch W. B2B brand management: Heidelberg: Springer, 2006. 374 p. Gabrielova T., Lytvynenko S., Ivannikova V. Cargo Science and Logistics. Kyiv: Condor, 2020. 268 p.

Kolbin V. V. Decision Making and Programming: World Scientific, 2003. 757 p.

Hugos M. H. Essentials of Supply Chain Management: New York: John Wiley & Sons, 2011. 354 p.

Kumar S. A., Suresh N. Operations management: New Delhi: New Age International, 2009. 277 p.

Book chapters with specific authors

Yuan X.-M. Impact of Industry 4.0 on Inventory Systems and Optimization. *Industry* 4.0 - *Impact on Intelligent Logistics and Manufacturing*. IntechOpen, 2020. P. 27–38. Heskes T., Kappen H. On-line learning processes in artificial neural networks. *Mathematical Approaches to Neural Networks*. Amsterdam: Elsevier, 1993. Vol. 51. P. 199–233.

Agolla J. E. Smart Manufacturing: Quality Control Perspectives. *Quality Control - Intelligent Manufacturing, Robust Design and Charts*. IntechOpen, 2021. P. 1–15.

Kaplan R. S., Norton D. P. Putting the balanced scorecard to work. *The performance measurement, management and appraisal sourcebook* / edited by C. E. Schneier, D. G. Shaw, R. W. Beatty, L. S. Baird. Amherst, MA: Human Resource Development Press, 1993. P. 66–79.

Aro-Gordon S., Gupte J. Contemporary Inventory Management Techniques: A Conceptual Investigation. *International Conference on Operations Management and Research*: conference proceedings (Mysuru, India, January 21-22, 2016). Mysuru: SDMIMD, 2016 P. 21–22.

Journal articles

Lander L. J., Parkin T. R. Counterexample to Euler's conjecture on sums of like powers. *Bulletin of the American Mathematical Society*. 1966. Vol. 72. № 6. P. 1079–1080.

Fugate B., Sahin F., Mentzer J. T. Supply Chain Management Coordination Mechanisms. *Journal of Business Logistics*. 2006. Vol. 27. №. 2. P. 129–161.

Rowley, J. Using case studies in research. *Management research news*. 2002. Vol. 25. № 1. P. 16–27.

Maghlaperidze E., Kharadze N., Kuspliak H. Development of Remote Jobs as a Factor to Increase Labor Efficiency. *Journal of Eastern European and Central Asian Research (JEECAR)*. 2021. Vol. 8, №. 3. P. 337–348.

Miranda, S. R. Preferred leadership styles by gender. *Journal of Management Development*. 2019. Vol. 38. № 7. P. 604–615. DOI: https://doi.org/10.1108/JMD-01-2019-0034.

Websites and internet resources

Gwet K.L. Cohen's Kappa paradoxes make sample size calculation impossible. *K. Gwet's Inter-Rater Reliability Blog.* 2021. URL: https://inter-rater-reliability.blogspot.com/2021/08/cohens-kappa-paradoxes-make-sample-size.html (accessed 15.10.2021).

Кодекс законів про працю України, №322-VII, від 12.10.1971, ред. від 14.08.2021. Верховна Рада України. URL: https://zakon.rada.gov.ua/laws/main/322-08 (дата звернення: 10.11.2021)

Operations Management / edited by M. Schiraldi. IntechOpen, 2013. URL: https://www.intechopen.com/books/3216 (accessed at: 21.11.2021).

Hofstede Insights. National Culture. URL: https://www.hofstede-insights.com/models/national-culture/ (accessed at: 03.12.2020).

10 DEFENSE OF THE THESIS AND EVALUATION CRITERIA

The master's program requires that students defend their theses in front of the Examination Board. During the defense, the student presents and defends his/her work. The thesis defense is designed so that the Examination Board members can ask questions and make sure that students actually understand their field and focus area.

The defense procedure is organized as follows.

First, the student reports the main results obtained in the master's thesis using visual aids created with the help of MS PowerPoint or other presentation software. The time limit for the presentation is 10 minutes.

After that, the student answers questions of the Examination Board members (10 to 15 minutes).

Then, the Examination Board Secretary reads out the thesis evaluation provided by an external reviewer (a faculty member from another department of NTU "KhPI" or a faculty member from another higher educational institution). The student is given an opportunity to respond to the remarks regarding the shortcomings of the thesis listed in the external reviewer's evaluation.

After all students who were scheduled to defend their theses on that day finish their defenses, the members of the Examination Board leave for discussion and evaluation of the theses and the way they were presented and defended. After the evaluation is over, the Examination Board members return to the students and announce the grades.

Taking into account the requirements of the Standards of higher education "Diagnostics of higher education. Requirements for the master's thesis in the specialty "Management" for the evaluation of the master's thesis, the criteria with the corresponding system of descriptors are used (table 10.1).

The following issues are taken into consideration in the evaluation and gradingmaster's theses:

- justification of the relevance of the research topic from academic and/or practical perspectives;
- logic of the thesis structure, clarity and persuasiveness of argumentation (including proper citation and referencing);
 - scope and depth of theoretical and methodological review;
 - scientific novelty of the results;
 - appropriateness of the selected research methods;
 - comprehensiveness and depth of the data analysis;
 - scope and relevance of practical recommendations;
 - quality of argumentation and comprehensiveness of the feasibility study;

Table 10.1 – Descriptors of criteria for evaluating a master's thesis

Criteria for evaluating	Description accor				
Criteria for evaluating		Description according to the scale of the national evaluation system "satisfactory" "excellent"			
The second of the feature of the second of t	· · · · · · · · · · · · · · · · · · ·		excellent		
The use of information	The necessary literary so				
resources		Own evaluation of the used	literary sources		
Logical and	The subject on the basis	of the research object is discl	osed		
argumentative		Selected theoretical and pra	actical material is analyzed,		
presentation of the		presented logically and argu	ied		
material			A formalized model of		
			the problem was built		
The correctness of	Relevant information and	d statistical databases were ar	nalyzed		
using statistical,			The latest research		
mathematical and			methods are used		
other methods					
Possession of	The hierarchy of	The properties of objects	Correct methods are		
generalization skills	concepts is applied,	that are on the border of	applied for solving		
	the general properties	subject fields have been	problems that are on the		
	of objects are	established	verge of subject areas		
	established				
Initiation and	The proposals are	Proposals are reasoned,	The proposals are		
substantiation of	formulated in general,	confirmed by calculations	substantiated, formulated		
approaches and	the calculations are		clearly and in detail,		
directions for solving	approximate		confirmed by calculations		
the investigated					
problem					
Scientific value	The results of the	Abstracts of the	The results of scientific		
	scientific study have	conference based on the	research were published		
	not been published	results of scientific	in scientific publications		
T	M:	research were prepared	Colonica of 1 1 1		
	Minor style violations,	Scientific style, design	Scientific style, design		
overall design of the work	design with comments	with minor comments	without comments		
	The tenie and main	The topic is outlined, the	The tenie research		
Report	The topic and main results are outlined	main results, the	The topic, research		
	results are outlined	proposals are reasoned	methods, research results, proposals are defined.		
		proposais are reasoned	The conclusions clearly		
			correlate with the research		
			results		
Illustrative material	The main results of the	Visualized research results	(findings), suggestions and		
Indicate to material	study were presented	conclusions	(IIII all go), buggestions and		
Completeness of the	In general, provided	Provided in sufficient	Provided in detail and		
answer to the	5	detail	reasoned		
commission's					
questions					
1					

⁻ quality of the appearance of the thesis (including graphic presentations

andtables);

- quality of the oral presentation of the results during the defense procedure.

Important! The grade "Excellent/A" can be awarded for the master's thesis if the following *additional* mandatory requirements are met:

- the student has presented his/her research results at a scientific conference, which is confirmed by the publication of the abstract of the presentation in the conference Abstract book;
- the student has a paper published (or at least accepted for publication) in a scientific edition (journal).

The results of the defense of master's theses are evaluated using the European Credit Transfer System (ECTS) (on the scale "A", "B", "C", "D", "E", "FX", "F"); a 100-point scale; and the national system ("excellent", "good", "satisfactory", "unsatisfactory").

National	ECTS	100-point	Explanation
5	A	90-100	Excellent
4	В	82-89	Very Good
	С	75-81	Good
3	D	64-74	Satisfactory
	Е	60-63	Sufficient (Satisfactory)
2	FX, F	<60	Failed (Unsatisfactory)

The final differentiated assessment of the thesis is determined by the Examination Board, its decision is final and not subject to appeal.

APPENDIX A

Tentative topics of master's theses in specialty 073 "Management"

For the educational programs:

- "Management of Organizations and Administration" (MOA);
- "Business Administration" (BA);
- "International Business" (IB).

Educational	Tentative (recommended) topics of the master's thesis
programs	, , , , , , , , , , , , , , , , , , ,
	ea: Sustainable development, social responsibility, corporate culture
MOA	Development of corporate organizational culture
BA	Management of corporate social responsibility of the company
IB	Management of sustainable development of the international enterprise
Research are	ea: Strategic management, crisis management
MOA	Strategic management of organizational development
	Management of strategic changes in the organization.
	Management of the enterprise restructuring.
BA	Development of a crisis management program for the company
	Management of strategic changes in the company
IB	Crisis strategy of the international company in the context of globalization
	Management of international high-tech enterprises based on business models???
	Management of enterprise development as part of an international strategic alliance
	Strategy of innovative development of an international company
Research are	ea: Business processes management
MOA	Management of internal business processes of the enterprise
	Management of relations with external counterparties of the organization
BA	Management of the organization based on the balanced scorecard
	Management of the company's business processes based on reengineering
	Management of business process outsourcing
IB	Management of high-tech innovations of an international enterprise
	Management of international business processes of high-tech enterprises based on
	the agile approach
	Management of international leasing in the enterprise's export activities
	Management of export-import operations of the enterprise
	Outsourcing in foreign economic activity of the enterprise
Research are	ea: Competitiveness management
MOA	Management of enterprise competitiveness
BA	The formation of competitive advantages of the enterprise
IB	Management of international competitiveness of the enterprise
	Management of the international competitiveness of the company's products
Research are	ea: Performance management
MOA	Management of the efficiency of the enterprise operations

	Organization performance management
BA	Development of a system for evaluating the effectiveness of the company's internal
DA	
ID	processes
IB	Management of financial results of an international company
	Management of financial results of an enterprise with foreign capital
	Management of the efficiency of the enterprise's export activity
	ea: Human resource management
MOA	Management of personnel potential of the enterprise
	Development of the personnel motivation system at the enterprise
	Remote work management of the organization's personnel
BA	Personnel productivity management
	Management of the enterprise personnel development
IB	Human resource management in the international company
	Outstaffing management in a multinational company
Research ar	ea: Management of marketing activities
MOA	Management of the enterprise's marketing mix
BA	Organization of sales activities of the enterprise
	Organization of advertising activities of the enterprise
	Management of marketing communications of the enterprise
	Formation of a product policy of the enterprise
	Improvement of a price policy of the enterprise
IB	The company's international marketing strategy
	Marketing strategy of the enterprise entering the foreign market
	International marketing strategy of a high-tech startup
	International branding strategy of the enterprise
	Commodity strategy of the enterprise's export activity
	The pricing policy of the enterprise on the world market
	International content marketing strategy of the enterprise
	The strategy of international promotion of the company's products
	Management of the international distribution system of the enterprise
Research ar	rea: Operational management and logistics
MOA	Management of production activities of the enterprise
1,1011	Management of the resource potential of the enterprise
	Inventory management at the enterprise
	Management of logistics activities of the enterprise
	Organization of the enterprise operations based on lean production principles
BA	Management of the logistics system of the enterprise
<i>D</i> 11	Enterprise logistics cost management
IB	Organization of international transport and forwarding services of the enterprise
עו	Management of international supply chains of the enterprise
	Management of logistics operations of an international company
	Designing the international supply chain of the company's products Logistics cooperation in the supply chain of an international company
	Logistics cooperation in the supply chain of an international company
Research ar	rea: Financial management, investment management

MOA	Formation of the financial strategy of the enterprise			
	Management of investment activities of the enterprise			
	Management of the company's debt capital			
BA	Enterprise cost management			
	Management of the company's investment attractiveness			
IB	Planning and optimization of enterprise costs in export (import) activities.			
	International financial planning of a high-tech enterprise			
	Management of debt capital of international companies			
	Investment activity of an international company			
	Management of the company's international investment projects.			
Research	area: Business modeling, project management, innovation management			
MOA	Management of innovations at the enterprise			
	Formation of the innovative potential of the enterprise			
	Management of innovative development of the enterprise			
BA	Formation of the business model of the enterprise			
	Management of business projects			
IB	Management of an international enterprise			
	International business management of high-tech enterprises based on the Agile			
	approach			
	Project management of an international company			
Research	area: Risk management			
MOA	Formation of the risk management system at the enterprise			
	Risk management in the innovative activity of the enterprise			
BA	Management of financial risks of the enterprise			
	Management of commercial risks of the enterprise			
IB	Management of currency risks of foreign economic activity of the enterprise			
	Risk management in the foreign economic activity of the enterprise			
Research	area: Quality management			
MOA	Developing a quality management system at the enterprise			
BA	Designing a TQM system at the enterprise			
IB	Management of the quality culture of an international enterprise			

APPENDIX B Sample abstract

ABSTRACT

The master's thesis contains 105 pages, 29 figures, 25 tables, 79 references, 2 appendices

Keywords: CORPORATE SOCIAL RESPONSIBILITY (CSR), CSR MANAGEMENT, CSR REPORTING, INTERNATIONAL STANDARDS OF CSR, CSR COMMUNICATIONS, SUSTAINABLE DEVELOPMENT, CREATING SHARED VALUE, CREATING INTEGRATED VALUE

The research goal is to develop recommendations on the improvement of corporate social responsibility (CSR) management for Nestle Ukraine.

The research object is the CSR management in the global company Nestle and Nestle Ukraine.

The subject matter of the research is theoretical, methodological, and practical aspects of the CSR management in the company.

In the thesis, the theoretical and methodological framework of CSR management was examined, a model of CSR management based on the concept of creating integrated value was proposed, the current trends in the CSR development worldwide and in Ukraine were analyzed, the performances of Nestle Global and Nestle Ukraine in the CSR sphere were evaluated.

As a result of the analysis, the deficiencies in the CSR management of Nestle Ukraine were identified, the directions for improving CSR management were suggested, specific measures within those directions were developed, the costs and expected results of the implementation of the recommendations were estimated. The practical value of the work consists in the fact that the implementation of the propositions will allow Nestle Ukraine to become more transparent and improve its image in the eyes of stakeholders.

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APPENDIX D

Headings format (example)

1 THEORETICAL AND METHODOLOGICAL FRAMEWORK FOR MANAGING CORPORATE SOCIAL RESPONSIBILITY

1.1 A review of definitions of corporate social responsibility

Despite the large body of literature on corporate social responsibility (CSR), the concept itself remains fuzzy and open to different interpretations....

...It means that the company produces a blended value, social value creation is not considered as something separate or peripheral, moreover, the social performance has parity with the economic and becomes "part of the corporate DNA".

1.2 International standards of CSR and their role in developing CSR management systems

One of the global trends in CSR at the end of the 20th and beginning of the 21st centuries is its institutionalization...

...The international standards of CSR provide guidelines for planning and controlling activities in the CSR sphere, help identify stakeholders, define material issues, develop CSR strategies, set key performance indicators.

1.3 The evolution of approaches to managing corporate social responsibility

The earliest CSR practices, such as charity and philanthropy were viewed as a zero-sum game...

...Later, however, it became apparent that socially responsible behavior could have an economic pay-off and benefit the long-term competitiveness of business.

APPENDIX E

Title pages (example) МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ «ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

Інститут Навчально-науковий інститут економіки,
менеджменту і міжнародного бізнесу
Кафедра Менеджменту
Спеціальність <u>073 «Менеджмент»</u>
Освітня програма Бізнес-адміністрування
До захисту допускаю
Завідувачка кафедри
Олена ПРОХОРЕНКО
(ім`я та прізвище)
(підпис, дата)
ДИПЛОМНА РОБОТА
другого (магістерського) рівня вищої освіти
Тема роботи Стратегічне планування розвитку підприємства
Шифр роботи БЕМ-М521а.05
(група, номер теми за наказом)
Виконавець Коваленко Сергій Михайлович
(прізвище, ім'я, по-батькові) Керівниця доцент Замула Олена Василівна

	Назва вир	обу,		Назва	Фор-	Кільк.	При-
	об'єкта або	теми		документа	мат	арк.	мітка
				Документи загальні			
				Завдання на ДР	A4	1	
				Пояснювальна записка			
				до ДР	A4	80	
				Ілюстративні матеріали			
Стратег	ічне планува	кни		Презентація			
розвитк	у підприємст	ъва			A4	11	
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				БЕМ-М621	БЕМ-М621а.05 ВД		
	Прізвище	Підп.	Дата			_	
Розроб.	Коваленко			Стратегічне планування	Літ.		Аркушів
Перев.	Замула			розвитку підприємства	ДРМ	1	1
						НТУ «ХП	I»
Н.конт.	Горбунов			Відомість документів	Кафедра Менеджменту		
Затв.	Прохоренко			Б ІДОМІСТЬ ДОКУМЕНТІВ		•	

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ «ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

Інститут (факультет) Навчально-науковий інститут економіки,		
менеджменту і міжнародного бізнесу		
Кафедра Менеджменту		
Рівень вищої освіти другий (магістерський)		
Спеціальність <u>073 «Менеджмент»</u>		
Освітня програма «Бізнес-адміністрування»		
ЗАТВЕРДЖУЮ		
Завідувачка кафедри		
(підпис)		
Олена ПРОХОРЕНКО		
(ім'я та прізвище)		
«» 202_ року		
ЗАВДАННЯ		
НА ДИПЛОМНУ РОБОТУ СТУДЕНТУ (ЦІ)		
Коваленку Сергію Михайловичу		
(прізвище, ім'я, по батькові)		
1 Тема роботи Стратегічне планування розвитку підприємства		
керівник (ця) роботиЗамула О.В., к.е.н., доц		
(прізвище, ім'я, по батькові, науковий ступінь, вчене звання)		
затверджена наказом закладу вищої освіти від «»20 р. №		
2 Термін подання студентом (кою) роботи		
3 Вихідні дані до роботи наукова та навчально-методична література,		
законодавчі й нормативні акти України, що регламентують порядок ведення		
діяльності, стандарт (ДСТУ) ISO 9001:2015, інформація про підприємство		

(Зворотня сторона «Завдання»)

- 4 Перелік питань, які потрібно розробити у пояснювальній записці
 Theoretical and methodological bases for evaluating the personnel productivity,
 Personnel productivity evaluation methods, The main characteristics of the
 development of the personnel productivity, General characteristics of the enterprise.

 5 Перелік графічного матеріалу (з точним зазначенням обов'язкових креслень)
 Презентація на 11 аркушах формату A4
- 6 Консультанти розділів роботи

	Прізвище, ініціали та посада консультанта	Підпис, дата	
Розділ		завдання	завдання
		видав	прийняв

•	- /	OTTO	DITTOIL	завдання	
,	, ,	ити	килачі	жиклиння.	
,	$\overline{}$	Lulu	ридан	эардания	

КАЛЕНДАРНИЙ ПЛАН

Номер етапу	Назва етапів дипломної роботи	Строк виконання етапів роботи	Примітки
1	Вибір і обгрунтування теми, постановка цілей і	•	
	завдань		
2	Аналітичний огляд джерел, вибір методики досліджень		
3	Підготовка і виконання пояснювальної записки		
4	Підготовка висновків до дипломної роботи		
5	Складання відомості документів, оформлення ПЗ		
6	Виконання презентації, доповіді		
7	Подання ДР на відгук та зовнішню рецензію		
8	Подання ДР на допуск до захисту		
9	Захист ДР		

Студент (ка) _		<u> </u>
	(підпис)	(прізвище та ініціали)
Керівник (ця) роботи _		_
	(підпис)	- (прізвище та ініціали)

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ «ХАРКІВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

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Кафедра Менеджменту		
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Освітня програма Бізнес-адміністрування		

ПОЯСНЮВАЛЬНА ЗАПИСКА

до дипломної роботи

другого (магістерського) рівня вищої освіти

на тему «Стратегічне планування розвитку підприємства»

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