



UNIVERSITY *of*
DEBRECEN

THESIS
FORMATTING REQUIREMENTS

for students in BSc/MSc programs
and postgraduate programs

Debrecen
September 2021



UNIVERSITY *of* DEBRECEN
FACULTY *of* ENGINEERING

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1 Introduction

The purpose of this document is to describe the content and format requirements of the thesis/diploma work (hereinafter: thesis) of students participating in bachelor's, master's, and postgraduate programs, based on the regulations of the Hungarian Accreditation Committee and the current rules of the University of Debrecen and the Faculty of Technology, and to provide assistance for successful preparation and submission.

2 General principles

The aim of writing the thesis is to organize, consolidate and apply the student's theoretical and practical knowledge, to study the relevant subtopic in depth, and to demonstrate research, computational, and design skills. By successfully completing the thesis, the student demonstrates that he/she is able to work independently on tasks related to his/her field of specialization. Deviations from the format requirements are possible with the agreement of the Head of Department. The format requirements for sub-tasks specific to the training (plans, drawings, etc.) are determined by the department concerned, if necessary.

3 Content requirements for the thesis

3.1 Length

Students in BSc, MSc, and postgraduate programs write a thesis.

Thesis (BSc)	Thesis (MSc)	Thesis (postgraduate program)
Minimum 40 pages (A/4)	Minimum 50 pages (A/4)	Minimum 40 pages (A/4)

The number of pages specified does not include appendices. Deviations from the above length requirements are possible with the agreement of the Head of Department (in the case of planning tasks). Page numbering must start at the "Table of contents".

3.2 Recommended structure

Depending on the topic, the thesis should **preferably** follow the structure outlined below:

- Outer cover (see Appendix 1)

- Cover page (see Appendix 2)
- Thesis topic announcement
- Plagiarism declaration (see Appendix 3)
- Abstract (maximum 1 page)
- Table of contents
- If necessary: list of figures, list of tables, explanation of abbreviations
- Introduction
- 1. Literature review
- 2. Material and method
- 3. Results and their evaluation
- 4. Inferences and proposition
- Summary
- Bibliography
- Appendices

Additional document (not to be bound into the thesis, not part of the thesis, separate document):

- Results of the plagiarism analysis (which must be uploaded to the e-learning platform).

The above structure also represents the main chapters of the thesis, which must be structured according to the requirements set out in section 4.1. Each main chapter must start on a new page. Each chapter must be numbered with decimal numerals, except for “Table of contents”, “Introduction”, “Summary”, “Bibliography”, and “Appendices”. The main chapters must be numbered with one numeral (1, 2, 3, etc.), the sub-chapters must be numbered with two or three numerals at maximum (1.1., 1.2., or 1.1.1., 1.1.2., etc.).

3.3 Content of chapters

It is recommended to prepare the main chapters considering the following:

Table of contents: Unnumbered chapter of the essay. The table of contents must be created as automatic links using the built-in tool in Word, which requires the chapters to be formatted

as headings. The table of contents must include the numerals, titles, and page numbers of the main and sub-chapters.

List of figures/ list of tables: Unnumbered chapter of the thesis, not obligatory. These lists are not a bibliography of figures/tables. They only indicate where a figure/table is located within the thesis. The list of figures/tables must be created as automatic links using the built-in tool in Word.

Introduction: Unnumbered chapter of the thesis. The choice of topic must be justified, and its significance and relevance and timeliness must be demonstrated. The general objective of the research must be clearly defined, as well as 3-5 additional detailed objectives (I examine, evaluate, specify, compare, etc.). Length: 1-3 pages.

Literature review: Elaborating on the literature related to the topic. This is intended to demonstrate the student's professional competence. Newspaper articles, non-peer-reviewed conference proceedings, and abstracts are not considered sources. Internet citations must not exceed 20% of the total number of sources, with the exception of Open Access or On-Line peer-reviewed scientific articles/books.

The results presented in the literature must be critically analyzed and evaluated. Where relevant, contradictions/shortcomings in the existing knowledge should be determined, and it must be specified whether the solutions described in the thesis will address them.

The length should preferably be 15-20% of the thesis. The method of referencing is described below.

Material and method: When elaborating on the materials and methods used in studies and monographic analyses, the circumstances of the experiment/study, and the methods of analysis must be described. The chapter must be structured according to the points described in the objectives. The chapter should not exceed 10-15% of the thesis.

Results and their evaluation: This chapter presents the results of the analyses. It must be structured and sequenced according to the points described in the objectives. The results should be summarized in tables, illustrated with diagrams, and their reliability should be verified by mathematical - statistical methods, taking into account the characteristics of the field. It is important for the student to record and explain his/her results accurately, and to compare them clearly with other test results. The chapter should be 40-50% of the thesis.

Inferences and proposition: The student must describe the main conclusions drawn from the results, and suggest practical applications and improvements. The chapter may be merged with the previous chapter with the approval of the internal supervisor. It should preferably be 2-3 pages long.

Summary: Summary of the main points in a maximum of 3 pages. It must briefly describe the circumstances in which the investigations took place and the issues they covered, and to what extent the general objectives were met. The key (quantifiable, if possible) outcomes, findings, and conclusions related to each of the objectives described in the introduction must be described. Concise and clear wording must be sought. Length: 1-3 pages.

Bibliography: The bibliography can only contain the sources cited by the student in the thesis. See chapter 5 for details on the bibliography.

Appendices: Place for larger tables, figures, technical drawings, or source codes that are not feasible or practical to be inserted into the text. In addition, the documents on which the questionnaire survey is based, as well as the basic tables for statistical and mathematical calculations, may be placed here. In some cases, shorter documents (e.g. contracts, legal details) may also be included. This should not exceed 15-20 pages.

4 Formatting requirements for the thesis

The finished thesis must be uniform in appearance. In order to achieve this, the following design requirements must be observed. The thesis must be created with a text editor with the following settings:

Page size	A4
Font:	Times New Roman
Thesis title:	20-point font size
Main titles:	16-point font size (1., 2., 3.)
Sub-titles:	14-point font size (1.1, 1.2, 1.3)
Sub-chapters of sub-	13-point font size (1.1.1, 1.1.2, 1.1.3)

titles:	
Text:	12-point font size, 1.5 line spacing, justified
Margins:	3 cm on the left, 2.5 cm on the top, bottom, right
Header, footer:	distance of 1.25 cm from the edge
Page numbering:	bottom of page, center-aligned Page numbering starts with the “Table of contents” and ends before the “Appendices”.

Deviations from the above page size requirements are possible with the agreement of the internal supervisor (in the case of planning tasks).

The content and aesthetic value of the thesis is increased by clear tables, figures, graphs, diagrams, and photographs. All tables, graphs and figures must be titled and numbered, and their source must be cited (see examples below).

- **Figures** should be placed proportionally in the middle of the page. They must be numbered, titled, and referenced at the bottom. Photographs or scanned sections from brochures may be used as figures, but the captions on the figures must be in English. See examples in chapter 5.2.
- **Tables** must be numbered, titled, and referenced at the top, centered. See examples in chapter 5.2.
- Figures and tables must be referenced in the text and the relevant source(s) must also be indicated in the bibliography.
- The size of tables, figures, images should not exceed half of the A/4 page.
- Full-page or multi-page illustrations and tables must be included in the Appendices
- Formulas should be placed 3 cm from the margin and numbered (in the case of more than one) between round brackets at the end of the line. The elements of the formula must be explained.

- The SI (Système International d'Unités) notation must be used for units of physical quantity.

5 Rules for referencing

Reference: When writing the thesis, it is compulsory to provide accurate and verifiable information on the sources used. Referencing means that during the preparation of professional materials, when the content of another publication is used (whether in paper or online format), a clear and precise reference must be made to the bibliographic data of the document used.

5.1 References to textual content

Data from the literature must be clearly referenced both in the text and at the end of the text. All training programs must apply the reference used by the IEEE database. In justified cases, the Head of Department may decide to use the Harvard referencing style. The formatting requirements for this are set out in Appendix 4.

5.1.1 Verbatim citation

Verbatim citation: When a passage of an author's cited work is used word for word. In this case, quotation marks must be used, and the sentence must not be altered (no omissions/additions), nor can the word order of the text be changed.

In the case of a verbatim citation, the exact page number must also be given, using the following format: [4, pp. 10-12], where 4 is the source, pp. is an abbreviation for page numbers, and 10-12 is the exact page number. If a single page is specified, only one "p" is written: [4, p. 9]

Example of verbatim citation:

"During test operation, certain fans exhibited strong vibration and noise. In order to avoid fan damage, and to guarantee safe operation, a diagnostic investigation was carried out on the air supply system, by means of concerted application of CFD technique and experimentation." [3, p. 17]

In the bibliography:

[3] J. Vad and E. Lukács, Fluid Mechanics Measurements, [Digital edition.]

Budapest: Akadémiai Kiadó, 2020. In: mersz.hu
https://mersz.hu/hivatkozas/m635fmm_73_p17#m635fmm_73_p17 (Date of
download: 2021.02.22. 10:15)

5.1.2 Summarizing, paraphrasing

Summarizing, paraphrasing: When there is no verbatim citation of a referenced work by an author, but its content is referred to. In this case, quotation marks should not be used.

Example of summary, paraphrase:

Decisions in a sustainable city are made with the goal of determining if the outcomes will be of any help concerning the city's long-term growth. It is key to consider in what ways a certain measure might improve the city's growth from economic, social, and environmental standpoints at the same time. [1]

In the bibliography:

[1] J. Tóth and D. Esztergár-Kiss, Smart City, [Digital edition.] Budapest: Akadémiai Kiadó, 2019. In: mersz.hu.
https://mersz.hu/hivatkozas/m440sc_1_p1#m440sc_1_p1 (Date of download: 2021.02.22. 10:07)

5.1.3 Requirements for in-text references

- Regardless of the form of the in-text citation (verbatim or paraphrase), a numbered reference in brackets immediately following the quoted text must be used to indicate the source of the reference. For example: [4, p. 9] or [4]. Each source is denoted by a different/unique number, so a given source is denoted by a given number, regardless of how many times it is cited. The first time it is cited (immediately after the cited text), it is given a serial number, for example "[5]", and from then on, each citation from that document is given the same serial number. The reference numbers in the text must correspond to the number given in the bibliography at the end of the thesis. The bibliographic reference number must be indicated by Arabic numerals.
- Immediately after the referenced text (whether verbatim or paraphrase), the corresponding reference must be added.
- Any paragraph that does not contain/ is not followed by a reference is considered to be the student's own thoughts.

- In heavily fragmented texts, it is advisable to cite after each paragraph (if not the student's own), even if it is from the same source.
- If the thesis also includes literature in a foreign language, interpreted/translated by the author of the thesis, the original source must still be cited.

5.2 Referencing figures/tables

The same rules apply to referencing the sources of figures and tables as to textual content. The exact source must be given in the text in square brackets with Arabic numerals.

5.2.1 Example of referencing figures

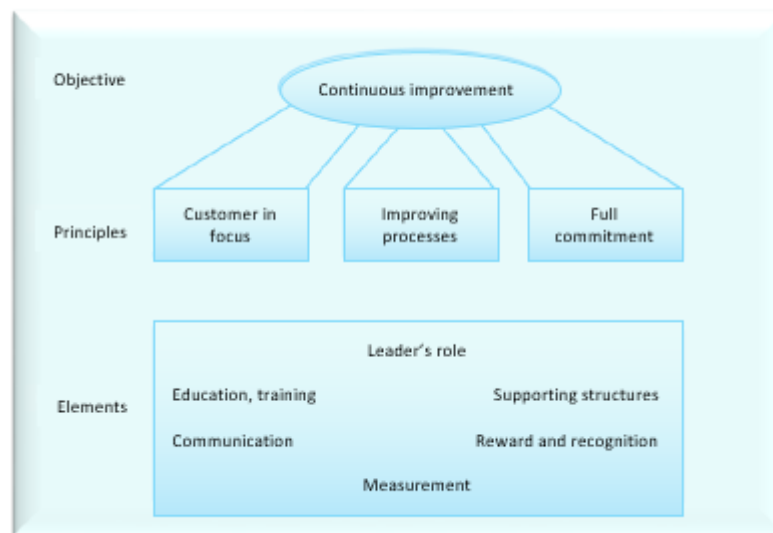


Figure 1: Model for implementing TQM [6, p. 42]

In the bibliography:

[6] A. R. Tenner, I. J. Detoro, TQM : teljes körű minőségmenedzsment. Budapest: Műszaki Kvk.,1999. ISBN: 978-0201563054 p. 42.

5.2.2 Example of referencing tables

Table 1: Manager-leader roles [8, p. 103.]

Manager-leader roles	
Management	Leadership
Planning	Vision
Organizing	Adaptation
Controlling	Delegation of greater scope of authority
Coordinating	Training
Checking	Care
Achieving results	Improving the systems

In the bibliography:

[8] J. Kövesi, J. Topár (eds.), A minőségmenedzsment alapjai, Budapest: BMGE GTK : Typotex, 2006. ISBN 963-9664-11-1 p.103.

5.2.3 Example of referencing the student’s own figures/tables

If the figure or table is self-edited based on a source, the reference must be indicated after the title of the figure/table as follows:

Figure X: Figure title self-edited based on [12]

If the figure or table is entirely the student’s own, the following reference must be provided after the title of the figure/table:

Figure Y: Figure title – self-edited

5.3 References in the bibliography

The thesis must include at least 10 peer-reviewed books, book excerpts, or journal articles as sources. Deviations from this may be made with the supervisor’s agreement.

Bibliography:

- All works referred to in the main text must be indicated.
- Only literature used by the student and referred to in the thesis may be included in the bibliography.
 - It is considered unethical to present documents in the bibliography that were not used at all.

- It is considered unethical to cross-reference someone else's ideas, i.e. the student uses document A, which used sources B, C, D and E, but the student does not cite document A as the source, but its literature instead.
- The bibliography must also include the exact reference of the figures and tables. See the example in chapter 5.2.
- Each source cited is listed only once in the bibliography, in the order of appearance in the text, numbered in ascending order from 1 to n in square brackets. Passages cited from the same source must be indicated with the same number along with the relevant page number. For example, [4], p. 9, referring to the same source elsewhere [4], p. 12.
- In addition to national literature, it is also necessary to draw on foreign-language sources.

Below are examples for each type of document.

Book:

- [1] J. Kovács, G. Takács and M. Takács, *Analízis*, Budapest: Nemzeti Tankvk., 2007, ISBN 963 999 111 78

Book chapter:

- [2] Barótfi, "Harnessing solar energy", I. Barótfi ed., *Környezettechnika*. Budapest: Mezőgazda, 2000, pp. 32–70. ISBN 963 286 009 8

Conference proceeding:

- [3] E. E. Gieva, K. I. Nedelchev, I. M. Kralov and I. N. Ruskova, "Analyses of Energy Harvesting Methods and Devices for Use in Transport Noise Harvesting," 2019 X National Conference with International Participation (ELECTRONICA), Sofia, Bulgaria, 2019, pp. 1-4, doi: 10.1109/ELECTRONICA.2019.8825649.

Journal article:

- [4] M. M. Chiampi and L. L. Zilberti, "Induction of electric field in human bodies moving near MRI: An efficient BEM computational procedure, " *IEEE Trans. Biomed. Eng.*, vol. 58., no. 10, pp. 2787–2793, 2011, doi: 10.1109/TBME.2011.2158315.

Dissertation:

[5] X. Zhao, "Thermal and Optical Management of Windows with Nanoengineered Transparent Insulation Materials," Ph.D. dissertation, University of Colorado at Boulder, USA, 2020.

[6] Hoseini, "Thermal performance of aerogel blanket insulation," Ph.D. dissertation, Simon Fraser University, Canada, 2017.

Regulation:

[7] MSZ EN 12261:2002/A1 Gas meters. Turbine gas meters. Effective date: 1 November 2006. *Date of withdrawal: (if relevant)* Budapest: Hungarian Standards Institution, 2006.

Product brochure:

[8] MUREXIN Limited Liability Company, Tile adhesion system Betonol, Budapest: MUREXIN Ltd.

Website:

Most of the websites used include the author and the title, so in these cases they must be indicated, otherwise it is sufficient to include only the website title, the exact web address (link) and the date of download.

[9] Vörösne Leitner and L. Kajtár. "Újra a gáztűzhelyekről... : Gyakorlati következtetések" e-gepesz.hu. <https://www.e-gepesz.hu/cikkek/18078-ujra-a-gasztuzhelyekrol> (Date of download: 2021.01.16. 10:11)

Company document:

The most important details of the document (author, year of publication, title) should be provided if possible.

[10] Kerektudomány Zrt. (2019) Annual report

If it is not possible to provide any identifying information other than the name of the company, it must be indicated the following way:

[11] Kerektudomány Zrt. Internal company document

5.4 Sample bibliography

- [1] J. Kovács, G. Takács and M. Takács, *Analízis*, Budapest: Nemzeti Tankvk., 2007, ISBN 963 999 111 78
- [2] I. Barótfi, "Harnessing solar energy", I. Barótfi ed., *Környezettechnika*. Budapest: Mezőgazda, 2000, pp. 32–70. ISBN 963 286 009 8
- [3] E. E. Gieva, K. I. Nedelchev, I. M. Kralov and I. N. Ruskova, "Analyses of Energy Harvesting Methods and Devices for Use in Transport Noise Harvesting," 2019 X National Conference with International Participation (ELECTRONICA), Sofia, Bulgaria, 2019, pp. 1-4, doi: 10.1109/ELECTRONICA.2019.8825649.
- [4] M. M. Chiampi and L. L. Zilberti, "Induction of electric field in human bodies moving near MRI: An efficient BEM computational procedure, " *IEEE Trans. Biomed. Eng.*, vol. 58., no. 10, pp. 2787–2793, 2011, doi: 10.1109/TBME.2011.2158315.
- [5] X. Zhao, "Thermal and Optical Management of Windows with Nanoengineered Transparent Insulation Materials," Ph.D. dissertation, University of Colorado at Boulder, USA, 2020.
- [6] A. Hoseini, "Thermal performance of aerogel blanket insulation," Ph.D. dissertation, Simon Fraser University, Canada, 2017.
- [7] MSZ EN 12261:2002/A1 Gas meters. Turbine gas meters. Effective date: 1 November 2006. *Date of withdrawal: (if relevant)* Budapest: Hungarian Standards Institution, 2006.
- [8] MUREXIN Limited Liability Company, *Tile adhesion system Betonol*, Budapest: MUREXIN Ltd.
- [9] Vörösne Leitner and L. Kajtár. "Újra a gáztűzhelyekről... : Gyakorlati következtetések" *e-gepesz.hu*. <https://www.e-gepesz.hu/cikkek/18078-ujra-a-gasztuzhelyekrol> (Accessed: 2021.01.16. 10:11)
- [10] Kerektudomány Zrt. (2019) Annual report
- [11] Kerektudomány Zrt. internal company document

5.5 Evaluation and credibility of sources

The literature review of the thesis must be based on professional literature and professional

documents. This means that students must not use or refer to sources that are not made by professionals and have no professional credibility (e.g. Wikipedia). Thus, only those works that were written by professionals are considered credible and professionally reliable, checked, and peer-reviewed.

The credibility, accuracy, and reliability of sources available on the Internet vary widely. A significant amount of online content is not subject to professional control. Therefore, it is advisable to consider the following when assessing materials or information found on the Internet:

- It is often not stated who the author is, but it is usually possible to deduce from the website which organization, institution, or publisher is responsible for the publication. Based on these data, the acceptability of online content may be better determined. Studies, articles, data, and information found on the websites of professional organizations with a credible, reliable, and recognized professional background are considered to be valid (e.g. International Monetary Fund (IMF), Organization for Economic Co-operation and Development (OECD), Hungarian Central Statistical Office). However, the content of websites that are not maintained by a professional organization is often questionable and less professional. Thus, such sites merely function as portals.
- It increases the credibility and verifiability of the material if the sources used are clearly indicated in the online document.
- The electronic databases and online content available through the websites of research institutions, higher education institutions, and their libraries are useful and even advisable for scientific research and for writing a thesis.

6 Plagiarism and similarity

6.1 Plagiarism

Omitting references is considered plagiarism. Plagiarism is the presentation of someone else's work as one's own, which is the most serious copyright infringement. Any suspicion of plagiarism must be avoided when writing the thesis. It is considered plagiarism:

- when an idea or passage written by another author is quoted without indicating the

original author's name and without using quotation marks,

- when another author's ideas are presented as one's own in a summary or paraphrase (after leaving out the author's name, using the passage, and slightly modifying its structure and content).

6.2 Plagiarism detection/similarity analysis

The University of Debrecen also carries out a plagiarism detection/similarity analysis using Turnitin and iThenticate. As a student, full registration is not possible.

During the plagiarism detection/similarity analysis, the thesis is uploaded to Turnitin's private system. The software searches for matches between the online content that it covers and the given thesis. A potential match does not in itself constitute plagiarism, because if the author of the thesis cited the relevant part in accordance with the citation rules, he or she has not committed an infringement.

Important: If a low score is determined, it does not mean that the thesis could not contain plagiarized material. Regardless of the detection/analysis results, the inspector will thoroughly review the thesis and, if necessary, discuss the questionable parts with the student.

Possible reasons for the low score:

- The program only compares the thesis to online content. Consequently, if a piece of writing exists only on paper, the program will not find a match.
- In the case of a translation, it will most likely not find a match either, even if the work is available online in Hungarian as well.

7 Appendices

- Appendix 1/A: BSc/postgraduate Thesis outer cover
- Appendix 1/B: MSc Thesis outer cover
- Appendix 2/A: BSc/postgraduate Thesis cover page
- Appendix 2/B: MSc Thesis cover page
- Appendix 3/A: BSc/postgraduate Thesis plagiarism declaration

- Appendix 3/B: MSc Thesis plagiarism declaration

As a separate document:

- Appendix 4: The Harvard referencing style

THESIS

(7 mm golden inscription)

Name :.....

Debrecen

Year

THESIS

(7 mm golden inscription)

N a m e:.....

D e b r e c e n

Year

THESIS

Thesis title

by N A M E

BSc/ postgraduate program name

Debrecen

Year

THESIS

Thesis Title

by N A M E

MSc program name

Debrecen

Year

Plagiarism Declaration

Declaration on conforming to rules on preparing a thesis

I, the undersigned
(Neptun-code:) by signing the present statement declare that the thesis,
entitled

.....
.....

- hereinafter called thesis - is my independent work. In the course of preparing the thesis, I conformed to the rules of Act No. LXXVI of 1999 on Copyright, and the regulations of the University of Debrecen regarding the principles of preparing thesis, particularly in respect of references and citations.

I declare, moreover, that in the course of preparing thesis, I did not mislead my supervisors in view of the condition of independent work.

I also declare that the submitted thesis in paper form and its electronic version are the same in every aspect (see Rules and Regulations, Article 24, Section 8).

By signing the present statement, I take notice of the fact that the University of Debrecen has the right to deny the acceptance of thesis and take disciplinary action against me if it is demonstrably not my intellectual creation, if any infringement of copyright falls under suspicion.

The denial of the acceptance of thesis and the disciplinary procedure do not affect other legal consequences (Civil Law, Law of Petty Offence, Criminal Law) caused by the infringement of copyright.

..... student

Debrecen,

Plagiarism Declaration

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(Neptun-code:) by signing the present statement declare that the thesis,
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..... student

Debrecen,