Guide for the preparation of theses for the ELTE Master of Geology degree

Length and formatting

The thesis should be a minimum of 50 pages and a maximum of 100 pages, ideally about 80 pages, font size 12, 1.5 line spacing, 2.5 cm margins. This length should include all parts of the thesis from the title page to the bibliography, except for the supplementary data/appendices, which may follow.

The aim of the thesis

The aim of the thesis is for the candidate to demonstrate that he/she is able to investigate a particular geological problem independently under the guidance of a supervisor. He/she has mastered the methodological skills necessary for investigation and analysis or is even capable of methodological innovation and further development. In the thesis, you must demonstrate your ability to analyse and relate data collected in the course of your work, to discourse beyond the data, and to critically compare previous knowledge on the subject with your own results. The new data, measurements, calculations, modelling results do not necessarily lead to a completely new geological conclusion or model, but the thesis should demonstrate the relationship of the new results to existing knowledge, self standing discourse and conclusions.

The choice of thesis topic

The topic can be any research or study related to the broad spectrum of geology, but in all cases the geological context of the research must be given, i.e. the role of the study in the world of geological research, the background, whether theoretical or applied.

Recommended structure of the thesis

The proposed structure of the paper, in line with the above objectives, is as follows:

Cover page
Table of contents
List of figures (optional)
List of tables (optional)
List of abbreviations (optional)
Introduction, research history, objective
Geological background
Material and methods
Results
Discussion
Conclusions
Summary
Abstract (English summary)
Acknowledgements
Bibliography
Supplementary data
Statement

Detailed guide

Cover page
The inside cover page should include the title of the thesis, the name of the author, the year of writing, the name and title of the supervisor, the name of the internal or external adviser(s), their job, title or degree, the name of the University and the Department where the thesis was written.
The cover page may include the ELTE logo and a picture of the topic of the thesis. A template is available for students to use when designing the inside cover page.

Table of contents
It contains the main chapters of the thesis, in the format that appears in the thesis, which may be numbered decimally (e.g. chapter 2.4.1) or may express the hierarchy of the heading without numbering, using only typography (different font sizes, use of bold and italics, alignment, etc.). The starting page number per chapter is given in right brackets. Only standalone chapters and subchapters should be included, not the lowest-order units used, if any, with a highlighted paragraph heading.

List of Figures, List of Tables and List of Abbreviations
The Table of Contents can be optionally followed by a List of Figures, List of Tables or List of Abbreviations. The List of Figures shows the short titles and page numbers of the figures. The List of Abbreviations is required when abbreviations other than international units of measurement or other common and commonly known abbreviations are used. Most papers contain abbreviations that are used very frequently, e.g. to denote long geographical names, units, etc. It is advisable to list them separately with their resolution and, in the absence of a list, to give the explanation at the first use in the text.

Introduction, research history, objective
The introduction should briefly explain and justify the choice of topic for the essay. Describe the interest and timeliness of the studies, measurements and analyses, and briefly give the scientific background. Describe the relevance of the topic to be studied. State the questions asked at the start of the work and the objectives to be achieved. Place the topic and aim of the thesis in the wider geological context.
The previous research can be presented in the chapter summarised under the title above, or in a separate chapter as required. In doing so, it is recommended not to follow the chronological order of the previous studies, but to follow the logic of the geological structure and to summarise the results of previous geological research on the problems to be discussed in the thesis. The description should also contain substantial information and evaluation: for example, it is not enough to say that Hantken (1867) had already visited the area, but it should be noted that he recognised the occurrence of the Dachstein limestone. The purpose and significance of your own research should be clear and understandable from the description of the history of your research.
A clear, even bulleted, statement of the objectives of the essay is essential. It can be presented as part of the Introduction or as a focused, stand-alone chapter.

Geological structure
Any geological knowledge that is relevant to the background of the thesis and relevant to understanding the results of the thesis should be given here. The study area should be placed here in the relevant geological setting, especially in terms of the direction of the study. The stratigraphy and structural position of the area can be described here. Care should be taken to get the proportions right, e.g. in a mineralogical work it is not necessary to give a lengthy

description of the major structure. This chapter should give any previous knowledge of the group(s) of fossils under study, or describe any relevant previous knowledge of the geochemical or mineralogical geology.
It is often useful for the author to summarise the geological background and previous knowledge in a single guiding chapter and to present the previous work in terms of the problem of the discipline. This can present possibly conflicting views and, once the issue has been decided, the current position. If there is not yet a consensus, the author can express a critical view of previous views.
The author should ensure that the geological background and references are not onesided. Indicate old but still relevant works and do not forget modern sources. It is particularly important, and most topics require it, to include references to the work, theoretical or practical results of non-Hungarian authors relevant to the topic or methodology of the paper. That is, the student should also conduct an independent international literature search on his/her own topic, in a manner that he/she is expected to have mastered in the course of writing the BSc thesis.
In this chapter, we avoid second references. References to textbooks or university notes should only be made if they provide new knowledge compared to previous publications (this may be the case if they provide an evaluative review of previous work), but may include a professional website or digital-only publication, map, figure or table that is relevant to the topic.

Test material and methods

One of the aims of the chapter is to describe the samples used in the work, the place and method of sampling, and the material tested in general. The locations of the sampling sites, the geological object(s) under investigation, the measurements (e.g. seismic sections) should be given in a form that can be retrieved in the future. This requires coordinates (EOV or longitude/latitude) and topographic and geological maps showing sufficient coordinates and scale. Excessive topographic map sketches are not sufficient, even for indicating the location of a mineral or archaeological deposit under study. In some cases, a confidentiality agreement may require that some of this information is not shown, but the subject leader or consultant must still have a copy of the confidential information. If the study is on museum collection material, the above data should be disclosed on the basis of the museum inventory/documentation and should be accompanied by the inventory number. For databases used, the source should also be provided. In the case of processed drillings, the drilling mark and number, the identification mark in the core inventory, drilling database is also required.
It is very important to describe the methods used in the thesis, in which proportionality should be sought, i.e. this chapter should not be over-emphasised in the thesis. An exception is the methodological thesis, where this chapter is by definition more extensive. It is not enough to supplement this chapter with references (e.g. 'for a description of the method, see the work of Kiskovács (2010)'), but a substantial, but preferably concise, methodological
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description should be provided. It is worthwhile to present the methods and solutions that play the most important role in the thesis in more detail, either by means of an example of the own study material or by means of illustrations taken from the published work of others.
In the methodological chapter, it is also useful to specify and justify the systematic approach and terminology used in the literature to describe and interpret your observations. The methods should indicate the measurement sites, the laboratories carrying out the measurements, the instrumentation, in the usual detail for the field. If the data to be presented have statistical characteristics, these may also be described here. If, in addition to the usual

office and graphics software, other specialised software was used in the preparation of the thesis, it should be described here.

Results

In this section, the student should describe the results of his/her independent research and analysis, as guided by his/her supervisor. The presentation should be descriptive, i.e. it should not contain any interpretation or conclusion. The presentation should not be dictated by the chronology of the studies and analyses, but by their professional logic. It is important to present the results in textual form, it is not sufficient to simply refer to 'the results of the measurements are shown in Figure X'.

It is very important to illustrate the results with a diagram, photograph, chart or table, depending on the topic. These should separate the author's own data from data and interpretations taken from others for comparison. It is important that the captions are legible, i.e. no smaller than font size 8. In the case of digital figures inserted as images, the resolution should be such as to allow legibility. The axes of the diagrams, the unit of measurement and the headings of the tables must be indicated. If you are using a figure published in English, please explain the captions or provide the English equivalent in the figure legend. Figures should be interpreted by means of drawings, letters or symbols in such a way that important stamps remain visible and are not 'overdrawn': these parts should be referred to in the description or interpretation, and a mere image should be accompanied by a detailed textual explanation of the figure.

An explanation is required for all figures, pictures and diagrams. This should explain what you intend to show by providing the illustration. In this way, the explanation will enable the figure to be interpreted independently (without having to read the thesis carefully).

Figures and pictures should be numbered sequentially, it is advisable to use a uniform numbering system. Exceptions are tables and figures grouped at the end of the paper, which form a series. Each set of figures should be distinguished by letters (a, b, c, etc.). Figures, pictures, diagrams, tables and annexes should be referred to in the text. References in the text should be in order, i.e. Figure 2 should be referred to before Figure 3. If the author wishes to refer to a later illustrative material, this can be done by bringing the figure forward or by indicating in which chapter the illustration and the related text are given later. The illustrations should be placed in the text so that the reference follows as closely as possible.

Discussion

The author should interpret the results separately from their description, i.e. in a separate chapter. What phenomenon has been identified? Why and how, based on what observations and data? What process is inferred from the phenomena and relationships identified? What further scientific or industrial, practical application has it established? What geological hazards did the investigation reveal?

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A clear distinction between description and interpretation is very important. Interpretation can be done in several steps, such as macro- and microfaunal interpretation, faunal unit identification and palaeoenvironmental interpretation, environmental modelling, evolutionary reconstruction.

In the discussion, he discusses whether the different studies (approaches, analyses) he has carried out have led to the same result. What is the explanation for any differences? Compare the results of your work with previous literature. Show how the results complement the already known, published (and possibly unpublished, manuscript) data. What do the resulting measurements, analyses and calculations mean in terms of the fundamental issues raised in the thesis? In the light of the results, how can the picture of the issue be modified, clarified or confirmed by the study? If possible, evaluate the importance (scientific novelty) of the results obtained and/or state the usefulness of the method and its limitations. Describe what further studies would be useful or necessary that could not be carried out in the context of the thesis, but which could be a step forward in addressing the initial questions or new problems that have arisen.

Conclusions
Briefly present the conclusions drawn from the thesis' studies, analyses and discussion, highlighting the achievement of the thesis' objectives and the answers to the main questions. State the main findings of the thesis, summarising the conclusions drawn on the basis of the previously detailed interpretation. Only include statements that are presented in the results and interpretation chapters of the thesis, where detailed documentation can be found, and where the train of thought leading to the conclusions can be followed. In this description, please indicate what conclusions you have reached on the basis of your investigation, analysis, train of thought, modelling, and possibly what working hypothesis you have stated and confirmed or refuted. This chapter should not contain new data or interpretations not previously discussed. Also briefly highlight how the findings and conclusions of your work relate to previous publications, data and analyses.

Summary
Summarise the content of the essay in no more than two pages. Briefly describe the aim of the work, its subject, the methods used and the main results and conclusions. This chapter should be interesting and understandable for readers with little knowledge of the subject. Use references here only in exceptional cases, e.g. when modifying or refuting a previous theory.

Abstract (English summary)
A concise, one-page English summary of the thesis should be prepared with a similar approach and content to the Hungarian summary. (If the thesis is in English, a Hungarian summary is included.)

Acknowledgements
A thesis is not usually just a tribute to the work of the thesis writer, so it is appropriate to thank them for the professional or human assistance they have received in the preparation of the thesis. Supporting companies, research projects and financial sources should also be mentioned.

Bibliography
At the end of the paper, you should provide bibliographic details of all published or manuscript works cited in the text, figures, figures, tables, figure legends, appendices. However, works not included in the thesis should not be included, even if they are relevant to the work.
From a formal point of view, it is recommended that the requirements of the Geological Bulletin should be taken as authoritative. The names of all authors (et al. should not be listed

in the reference list), the initials of the first names, the year and title of the work, the name of the journal, the volume, and the page number should be indicated. In the case of online publication, the digital identifier (DOI) replacing the latter should be provided.
In the case of books or parts of books, in addition to the author, the names of the authors or editors of the book, the year of publication, the title of the book, the publisher, the place of publication, the page number of the book or part of the book, the beginning and the end page number. In the case of theses and dissertations, in addition to the general bibliographical information, the university and department must also be indicated. The geological map used must also be cited, with the scale and the publishing institution.

Supplementary data

If necessary, any appendices (e.g. data not strictly necessary for reading the text but required for comprehension, additional diagrams, maps) should be stapled at the end of the essay or, in the case of oversized pages, attached in a bag or holder attached to the inside back cover of the essay.

Statement

The declaration required by university rules is part of the thesis and must be issued by the student. It should be placed at the end of the bound work. The form to fill in is available on the page below.

Budapest, 29th March 2024

STATEMENT

Name:

Neptun ID:

ELTE Faculty of Science, study programme:

Title of diploma work:

As the author of the diploma work I declare, with disciplinary responsibility, that my thesis is my own intellectual product and the result of my own work. Furthermore, I declare that I have consistently applied the standard rules of references and citations.

I acknowledge that the following cases are considered plagiarism:
– using a literal quotation without quotation mark and adding citation;
– referencing content without citing the source;
– representing another person's published thoughts as my own thoughts.

Furthermore, I declare that the printed and electronical versions of the submitted diploma work are textually and contextually identical.

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