



Photo: V. Dimmen

Guidelines for master's thesis

Department of Earth Science



UNIVERSITETET I BERGEN

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MASTER'S THESIS – STRUCTURE AND CONTENT

The master's thesis in Earth Science should be a documentation of the research part of the master's study. The thesis can be written in several ways, but the Department of Earth Science has created some guidelines to guide the organization and content in the different parts of the thesis.

1. Background

The thesis for the master's degree in Earth Science is a documentation of the research part of the master's program. A master's thesis is usually the student's first opportunity for independent, scientific authorship. In the following guidelines for the organization and content of the different parts of the thesis are outlined.

2. General structure of the thesis

The thesis should be written as a *monograph*. It should, generally, include the following chapters: abstract, foreword, introduction, theoretical background/geological framework, data and methods, results, discussion, conclusions, and reference list. In addition, appendices can be used if needed.

The thesis should be systematically organized, and the text and figures must be easily readable. The line spacing should normally be 1.5, and the margins should be at least 2.5 cm. The exception to these formatting requirements is the reference list, where each reference should be entered with a hanging indent. In the reference list, a line spacing of 1.0 can be used. The entire thesis is recommended not to exceed 100 pages, not including the reference list. Correct spelling and grammar will be emphasized in the assessment of the master's thesis.

3. Supervision, copyright, and language

Supervision

A master's project is to represent the student's own research and shall be an independent thesis. Each student will be assigned a main supervisor and one or more co-supervisors. The supervisor's role is to provide the student with support during the work with the master's thesis. The content of the thesis must be carefully discussed between the student and the supervisor. The student must give the supervisor reasonable time for reading and discussion of the thesis. It is also recommended that the writing starts as early as possible and is followed up by the main supervisor throughout the entire study. The Department of Earth Science has outlined some points to help the student and supervisor to clarify what may and should be expected, [read the expectation letter here](#).

Copyright

The general rules of copyright also apply to master's theses. This means that it is not allowed to copy text from other publications (plagiarize). If figures are copied or presented in a modified form, the original source must be cited. Quotes and discussion of other publications must be correctly cited (see section on "References and reference list" for information on correct use of references). Personal

communications from colleagues and other researchers can only be used with their approval. Read also the [Guidelines on Academic integrity and Cheating at the University of Bergen](#).

Language

The master thesis should normally be written in one of the three languages, Norwegian bokmål, Norwegian nynorsk or English.

4. Thesis structure and content

Thesis front page

The master's thesis should have a standardized front page. The front page should list the title of the thesis, the name of the master's program, i.e., "Master's Thesis in Earth Science," as well as the student's name. The front page should also include the name of both the department and the university and display the University of Bergen's logo (the Owl). **It is not permitted to use other logos on the front page of the thesis.** Other logos may be presented on other pages in the thesis. Figures or images should also not be used on the front page. The front page should include the month and year for when the master's thesis was submitted. See the last page of this document for a template to be used for the front page.

Abstract

The first page of the master's thesis should be an abstract. This is a short version of the thesis and should be maximum one A4 page. The abstract/summary should provide a concise and precise overview of the thesis's research question and purpose, theoretical framework, main results and conclusions. The abstract may also present overarching implications of the research. The page numbering of the abstract should be in Roman numerals.

Acknowledgements

In the acknowledgements, the student should thank the main contributors to the master's thesis. The student should thank the supervisor(s) for their contribution to the thesis. The affiliation of the supervisors should also be specified. Furthermore, the student should thank for access to data and software that have been used in the thesis, as well as any support that the student has received throughout the work with the thesis, for example financial contributions. Other people who have contributed to the thesis, for example assisted in the field or in the laboratory, should also be mentioned. The page numbering of the acknowledgement should be in Roman numerals.

Table of contents

The table of contents should provide an overview of all chapters and subchapters in the thesis and is intended to show the structure of the thesis. All listed chapters and subchapters in the table of contents should be associated with a page number. The page numbering of the table of contents should be in Roman numerals.

Introduction

The introduction chapter should provide a background for the work presented in the thesis. An important element of the introduction is to present the objective of the thesis and any sub-objectives. The introduction should also place the topic of the master's thesis within an existing research field. In the introduction, the student should further outline the data and research methods used to solve the research questions. Any study area should also be briefly presented, preferably with a figure. Lastly, the introduction should explain why the master's thesis is important to conduct and what new knowledge it will contribute to. The recommended length of the introduction is approximately 2-3 pages.

Data and methods

The data and methods chapter should describe the data used in the thesis, for example seismic data, field and cruise samples, and/or models. All methods applied in the thesis must also be described in this chapter. The principles behind the methods can be presented, but only briefly. Any methods that do not follow standard protocols should, however, be described in detail. Generally, it should be possible to follow the methods used in the thesis step by step by reading the text. The student should also describe potential sources of error that may arise in the data material or during the work with the thesis. The data and methods chapter is recommended to comprise about 10-15 pages of the whole master's thesis.

Results

The presentation of the research results is a central part of the thesis and should make up about 15-20 pages of the master's thesis, including text, tables, and figures. In the results chapter, all data that rise from the use of the methods listed in the data and methods chapter should be described. If the results cannot be easily connected, subchapters should be used. An assessment of the results can also be included, but without discussing them. An overarching principle is that the results should be presented in a way that makes it possible to verify the investigations/analyses that have been carried out. Figures and tables, as well as figure and table captions, are an important part of the results chapter. There must be a natural connection between the data and methods chapter, the results chapter, and the subsequent discussion chapter, but the results should only be described and not discussed in the results chapter.

Discussion

The discussion chapter is recommended to make up about 10-15 pages of the master's thesis, not including figures. The chapter should begin with a brief introduction that prepares the reader for the content of the discussion. The results should then be discussed in their entirety, considering the various analyses presented earlier in the master's thesis's overarching research question and any sub-questions. The results should also be viewed in relation to already published studies within the relevant research field, if this exists/is available. It is through the discussion that it should be documented whether the thesis's results support or differentiate from existing/previous research and other data.

Conclusions

In the conclusions, the main results of the thesis should be summarized, for example as bullet points. The student should clearly demonstrate what conclusions have been reached and what answers the study has provided to the master's thesis's research question. The length of the conclusions should normally be one to two A4 pages. No new elements should be introduced in the conclusions.

Further work

It is recommended that the thesis concludes with a short text, no longer than one (1) A4 page that describes how the work in the master's thesis can be continued.

References and reference list

In the master's thesis references/citations are to be included in the main text. The references are given with the author's name and year, for example, Nordmann (1993), Nordmann and Svenske (1999), or Nordmann et al. (1999). Chronologically numbered references (such as "1", "2", "3") are not allowed.

A reference list should be included after the conclusion/further work chapter and before any appendices, and should provide a complete listing of all references used the main text, figures, tables, and any footnotes.

Several different standards exist for reference lists. It is important that the reference style chosen is used consistently throughout the entire master's thesis. Have a look at the reference format from a recognized journal or other master's theses. The students are also expected to familiarize themselves with the University of Bergen's guidelines for integrity and cheating, where the use of artificial intelligence is specifically mentioned: <https://www.uib.no/en/sa/165062/academic-integrity-and-cheating>.

Guidance and advice on use of references and academic writing can be found at: <https://www.sokogskriv.no/en/>

Appendices

The use of appendices should be limited. When used, the appendix/appendices should be placed at the very end of the thesis, after the thesis's reference list (see above). References that are used should have their own reference list after the appendix/appendices.

Figures and tables

Figures and tables should be presented in a way that makes them easy to read. The font size used in the figures must be large enough to ensure the figures are easily readable. It is also important that scale and orientation (e.g., east, west) are indicated in figures used. Figures/tables should always have figure/table numbering, for example, "Figure 1.", and a caption that briefly describes what the figure/table shows. Generally, the first sentence in the figure/table caption should describe what the figure/table shows, before going into more detail in the subsequent sentences (For example: "Geological map of the study area. Bedrock is shown in green color and sediments are indicated with..."). It is important that the figure/table caption is informative and represents an independent text. The figures and tables should be shown in chronological order in the text. Figure captions should always be placed beneath the figure, while table captions should be above the tables.

5. On the use of grammatical tense

To learn the correct use of tense, it is recommended to study published papers and discuss this with the supervisors. It is also encouraged to look at previous master's theses published in [BORA](#).

REGULATIONS AND ETHICAL GUIDLINES

All students are obliged to familiarize themselves with the current regulations for studies at the University of Bergen. The link to the regulations at the University of Bergen and the Faculty of Mathematics and Natural Sciences can be found here (in Norwegian): <https://lovdata.no/dokument/SF/forskrift/2023-06-15-1359> and <https://www.uib.no/matnat/52313/reglement-i-utdanningssaker-ved-det-matematisk-naturvitenskapelige-fakultet>

Note that the regulations in Norwegian are the official rules. The English translation (“[Regulation concerning studies at the University of Bergen \(study regulation\)](#)») and the «[Supplementary rules to Regulations concerning studies at the University of Bergen \(study regulation\) – Faculty of Mathematics and Natural Sciences](#)”) is not official. In the event of any inconsistency, the Norwegian versions are the valid one.

All students have a duty to follow the rules regarding citation in written texts: <https://www.uib.no/en/sa/165062/academic-integrity-and-cheating>

Plagiarism in submissions of texts and in master's thesis is considered cheating and can lead to the annulment of the exam result and suspension from the university.

BORA

[BORA](#) (Bergen Open Research Archive) is the University of Bergen's digital, institutional archive and contains master's theses, doctoral dissertations, articles, and books. All material in BORA is openly accessible to everyone. All students with a master's degree from the University of Bergen can make their thesis available in BORA. This is done in *Inspira* when submitting the master's thesis. It is therefore important that the student clarifies with the main supervisor whether the master's thesis can be published in BORA before submission.

DATA STORAGE

If data/results are subjected to limitations on use/publication, this should be made known to the student at the beginning of the master's program, and, if needed, a separate agreement should be signed. Data used in a master's thesis and the results obtained during the study should not be passed on internally or externally without the consent of the main supervisor.

After a master's project is completed successfully or terminated before it is finished, the student and main supervisor should agree on which data and results should be stored for the future. The main supervisor is responsible for ensuring that the project data is stored in a safe way, and the student is responsible for collecting data from the project and delivering it to the agreed-upon data-storage/person.

TEMPLATE FRONT PAGE - MASTER'S THESIS

<Title of thesis>

< Student name>

Master's thesis in Earth Science



Department of Earth Science

University of Bergen

<month> <year>

