

Master's dissertation:

Guidelines & procedure

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1. General guidelines

Writing a dissertation (and its oral presentation) are essential components of the master program in Geology. In this document, you will find a series of general guidelines that will be useful for successfully completing this important aspect of your Master's studies. As a consequence of the specialization or topic chosen by the student, certain aspects of the dissertation *may* have to comply with additional specific guidelines. The student should therefore contact his/her supervisor or tutor while writing the dissertation to accommodate these specific guidelines.

Depending on the active corona-measures, modifications may be required with respect to the execution and reporting of the research activities. This will be communicated in due time through UFORA.

A dissertation is the scientific report on a research project that you have performed independently. The activities that were essential to your research (literature review, data collection in the field or in the lab, processing and analysis of data, discussion and conclusions) should be clearly presented and logically organized in your manuscript. Therefore, the general structure of a dissertation contains the following essential elements:

- Cover page
- Preface – acknowledgements
- Table of contents
- Introduction (*including problem definition and research objectives*)
- Research description
- Conclusions
- Reference list
- Appendix

The **Preface** (or *acknowledgements*) is used to thank individuals or organisations, and can be supplemented with some personal statements (motivation, experiences, etc.). It should not include scientific content such as problem definition of objectives and it can be written in a non-scientific style.

A **Table of Contents** (TOC) should contain a balanced amount of entries: not too many and not too few. Titles and numbering of the TOC should of course match the text. If required, this may be followed by a **Table of Figures** and/or an abbreviation list.

“**The Story of my Research**” is an **optional** initiative to describe, briefly but creative, to a broad audience (as if you would explain it to your colleagues), what you “loved” about your dissertation. This may deal with the reason behind your topic choice, the beauty of a specific method or the genius of your results. It is written in English, but can be in an informal, non-scientific writing style. For example, you may also add one figure which can serve as “graphical abstract”. This can either be one of the figures from your dissertation, or a new comprehensive figure. In any case, it is recommended this is a visually attractive figure (you may choose to make a cartoon... be creative!). You may even consider making a short movie on YouTube. All this could be used by us (with due reference) to illustrate the dissertation work of the students. This is a nice (non-mandatory!) extra to highlight your work for the larger audience, and may give you better odds to compete in awards such as *Geologica Belgica*, *Belgian Committee for Hydrogeology* or the *Flemish dissertation Award* (please contact your supervisor for more information).

The **Introduction** contains the rationale and state-of-the-art of your research, leading to a clear definition of the research objectives. Here, you clearly explain the research questions that you will address, the hypothesis/hypotheses you will test, the strategy or approach that you will use, and why.

The **Research description** usually covers several chapters and contains the following elements:

- 1) A concise but clear and **critical discussion or review** on the geological background and/or environmental setting of your study area. Depending on the topic, it may deal with the research methodology, inference methods,... Please write this chapter in function of your research questions and objectives and do not deviate too far from the topic. Limit the discussion to relevant and up-to-date issues and do not dig into (geological) history if this does not contribute to your own research. Strike the correct balance between the literature overview relevant to this chapter, and the literature cited in the **introduction** and the **discussion**. Therefore, beware of repetition! Sufficient and correct **referencing** to the literature sources is of particular importance in this section.
- 2) A **material and methods** chapter gives a description of the available and used datasets, as well as the applied instruments and analytical methods. Restrict yourself to the essential and be clear. Be transparent in the methods' descriptions and clearly state which work was carried out prior to your dissertation and/or by somebody else (e.g. by technical staff), and mention their names and the context. Explain where your material is stored/deposited/curated and/or where your data will be stored/accessible.
- 3) A **results** chapter, followed by a separate **discussion** chapter. The results section presents the data and should be seen as a report, illustrated by figures and tables. It should not contain interpretations, which is reserved for the discussion section. Make sure not to introduce "unreported" data in the discussion section, use a logical structure and do not repeat yourself (do not repeat the same data in different forms in different tables). Be critical of your own work in the discussion and refer to precision and accuracy of your data. Ideally, the discussion topics relate to the research objectives listed in the introduction. Confront your results to findings in literature. The sub-sections of the discussion chapter can already contain partial conclusions.

The final chapter contains a brief summary of the essential elements of your thesis work and clearly formulated general **conclusions**. These should be more than just a repetition of the partial conclusions reported earlier in the thesis. The general conclusions combine the partial conclusions and integrate them in a wider context. You should also refer to the research questions presented in the introduction and evaluate to what degree you fulfilled the research objectives. You can make suggestions for further research, if needed. A reader should in principle obtain a clear view of your thesis work by reading the introduction and the conclusions alone. You may use this as a criterion to check these two parts of your dissertation.

The **bibliography** (*reference list*) is not intended to give a full overview of all that is published on your thesis topic. Restrict your bibliography to those papers and books that you have effectively read (maybe not from a to z but certainly the parts relevant to your work), and which you have used for the thesis. The main importance of a reference is that it is widely available and – preferentially – peer reviewed (the so-called A1 papers). Internet and Wikipedia resources do not fall under this category and should be **avoided**. Try to be consequent in the formatting, possibly adopting the formatting style used by a leading journal in your research area. All references cited in the main text should appear here and vice versa. A referencing software (EndNote, Mendeley, Reference Manager) may be used to facilitate the writing of the reference list.

The **appendix** (if applicable) contains all the information (tables, figures, monitoring data, etc.) that supports your work but is not essential to understanding it (and/or too voluminous to place in the body text).

Beware of plagiarism. Plagiarism is a form of fraud and will be sanctioned. According to the examination code, plagiarism is the presentation of (parts of) a source without referring to it, as if it were your own work. Plagiarism can pertain to various presentation forms such as text (in writing, oral), images (photos, motion picture, graphics, schemes, figures, ...), data, structure, line-of-reasoning, ideas... You must be careful and thorough in your referencing to sources. Copying and pasting of text fragments from other documents, even when a few words were changed, is considered a quotation, and should be clearly identified as such (text between quotation marks, with reference to the source, including the page). If this rule is not complied with,

this is plagiarism. Do not use too many direct quotes. After all, the thesis should be your own work! More information about this is given in the “*Ethical Code Scientific Research in Belgium*”, which can be found on **UFORA** folder (Infosite Master of Science in Geology), under “**Content**” and “**Info dissertations**”.

Additional information regarding writing a scientific text is offered through the UGent student portal (only in Dutch): <http://www.ugent.be/student/nl/studeren/taaladvies/schrijven>

2. Mandatory layout & content guidelines

- The body text of the manuscript (excluding reference list and appendices, but including figures) contains minimal 30 and maximum 60 pages of text in a normal font size (e.g. Arial 10) and clear line spacing (e.g. not less than 1,15).
- The layout of the **front page** should be **strictly** made according to the standard template, provided as a .docx template on “**Info dissertations**” on **UFORA** (infosite Master of Science in Geology). Any layout change will not be tolerated. In the start of May 2022*, you will be invited by the Faculty Student Administration to consult your supervisor and enter your dissertation title in OASIS by the end of May. This title will be confirmed during the meeting of the examination board meeting in April 2022*, in consultation with your supervisor. Also make sure that in OASIS the name of your supervisor (and possibly supervisor) are correctly linked to your dissertation.
- The names of the jury members, will be announced after the April 2022* meeting of the examination board. Please carefully copy the names and titles of the jury members.
- You are allowed to include a Dutch or English abstract (but this is not mandatory). This summary is provided prior to the introduction.

Any failure in following these (simple) guidelines will lead to a **rejection** of the manuscript. This check will be performed after the submission deadline. When rejected, this means an automatic transfer to next examination session.

**In case the dissertation is planned for the 1st session (January), this information will be requested in advance.*

3. Submission

The submission of your dissertation is **only** allowed when your supervisor agrees you can submit. Please make timely arrangements with your supervisor. In case of dispute, the student should contact the chairman or secretary of the examination board.

The dissertation must be submitted, before the set deadline, uniquely as a pdf document (MSc_Name_2022.pdf) through the infosite of the **dissertation on UFORA**. You are automatically registered on this infosite (CMASTERPROEF – CX00023) if you have taken up your dissertation in your academic curriculum (this is not the infosite of the Master of Science in Geology). Prior to submission, please read the short manual through the link below;

<https://www.ugent.be/student/en/ict/ufora/ufora-masterproef-eng.pdf>

Please make sure your file is not too heavy (try to limit this to 100 Mb). You can possibly discuss with your supervisor if certain parts of your dissertation can be submitted as attachment (max. 800 Mb). Check with your supervisor whether confidentiality agreements apply to your study, and which options you should or should not tick when uploading your file(s). This is also valid for the choice if the dissertation (with or without embargo period) can be publicly accessible, through the Open Access option.

The pdf version of the manuscript will be distributed to the jury members by the examination board. Failure to submit by the deadline will lead to a rejection of the manuscript; no late submissions will be tolerated.

Because of the current Corona-reglementation, only a digital version of the dissertation is required; no hardcopies can be requested from the student. Students do not need to submit a printed version for the library.

Submission deadlines:

1) First term exam period (first session)*

- 10 January 2022 at 12h00 latest: submission pdf version on UFORA

2) Second term exam period (second session)

- 30 May 2022 at 12h00 latest: submission pdf version on UFORA

3) Resit exam period, (third session)

- 15 August 2022 at 12h00 latest: submission pdf version on UFORA

* Submission & defence during the **first term exam period** is only allowed if all other credits for completing the Master of Science in Geology have been (or will be) obtained during this session, allowing to graduate after the deliberation session in February. This, however, needs to be requested in advance by the supervisor to the examination board. Failure to submit or to pass the dissertation will automatically lead to a next possibility to submit during the resit exam period in August – September.

4. Evaluation & defence

After submission of the Masters' dissertation, the manuscript will be evaluated by 2 jury members (by preference one "internal" and one "external" to the research unit), supervisor and possibly co-supervisor.

In a **first phase**, the jury evaluates the scientific content (literature review, fieldwork, analyses, calculations, interpretation, discussion, conclusions and originality) and the layout or presentation (structure, linguistic quality, illustrations and reference list). Your commitment and critical attitude will only be evaluated by your supervisor(s) and tutor(s). This first phase counts for **80%** of the total score, subdivided in 40% for the supervisor(s) and 20% for each jury member.

If this first evaluation is **positive**, you will be notified by the examination board to proceed to the oral presentation. After the approval to defend, a defence schedule will be drafted, based upon the availabilities of the supervisor and the jury members. Depending on the composition of the jury (eg foreign members), the defence may be organized online defence through MS Teams (this will be notified well in advance).

Prior to the (public) defence, the student will receive the comments and recommendations of the promoter(s) and the jury. The actual oral presentation (15 minutes) and defence (15 minutes) will cover the remaining **20%** of the total score, based upon presentation skills, scientific content and answers to the questions of the jury.

1) *First term exam period (first session)*

- 31 January 2022: release of reviewers comments & confirmation of presentation schedule
- 4 February 2022: MSc defence & questions

2) *Second term exam period (second session)*

- 27 June 2022: release of reviewers comments & confirmation of presentation schedule
- 30 June – 1 July 2022: MSc defence & questions

3) *Resit exam period (third session)*

- 5 September 2022: release of reviewers comments & confirmation of presentation schedule
- 8-9 September 2022: MSc defence & questions

5. Contact

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