

Guideline for a Master thesis at the Institute of Silviculture

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1 Introduction

As a condition for the achievement of a diploma degree at the University of Natural Resources and Applied Life Sciences Vienna, a master thesis (diploma) is demanded. The type of the thesis (diploma) is designed according to the special study laws “**General higher education law (AHStG) § 25 Abs. 1, conditions 1 October 1994**”.

This guideline is relevant for a M.Sc thesis to be submitted within the framework of an ERASMUS program and for M.Sc thesis at the University of Natural Resources and Life Sciences (BOKU) also.

The aim of this guideline is to avoid any ambiguity at the time of the formal realisation of the thesis (diploma) and to facilitate the work in a systematic and advanced way. M.Sc thesis (Diploma) at the Institute of Silviculture allows you to apply the theoretically acquired knowledge on silvicultural basics. In most cases you are confronted with a problem, for which different solutions will have to be compiled. This research work will be handled like a research project that provides you a very effective and successful training for your future career. The guideline will support you in that progress.

2 Description of the Process

2.1 Starting discussion and initial information

At the beginning of a M.Sc thesis at the Institute of Silviculture, the Head of the Institute (IL), the executive supervisor (aB) and the student participate in a **starting discussion**, from which an **opening protocol** is compiled. If the Head of the Institute does not take part in the initial discussions, the IL has to be informed about the outcome of the kick off by submitting the opening protocol and the BOKU form for the registration of the master thesis. This protocol contains the objectives of the work, procedures, basic conditions as well as a working schedule, which are elaborated in cooperation of all participants:

- Specification of tasks (problem definition, objectives, hypothesis, methods) and classification of the problem field
- Estimated duration
- Workplace, accommodation of the student (with outdoor works), confidentiality in dealing with data and information, other agreements
- Further support and assistance at the institute (e.g. to carry on thesis (diploma) work; allocation of PC, laboratory, and other devices available)
- Deadlines and interim reports, presentation of the research progress and final presentation in the context of the initial and final diploma seminar, any publications)
- Information about good scientific practices for quality assurance of the work (reference to guidelines of the ombudsman for ensuring good scientific practice available on the BOKU homepage)

A Master's thesis starter kit is handed over to the students at the start of the interview. The starter kit contains all the forms and guidelines that are required to complete the master's thesis at the Institute of Silviculture. The starter kit can also be picked up at the secretariat.

The formal supervisor of a Master's thesis (B) is always a habilitated university teacher of the institute, who is responsible for the supervision and final evaluation of the Master's thesis. Co-supervisors of a thesis are (mostly) not-habilitated university teachers, who provide additional support to the students in the course of the Master's thesis. The so called executive supervisor (aB) is a member of the scientific staff of the institute, who supports the candidate for the Master's thesis both with training and technical assistance during the work. The aB advises the students in particular on technical questions, methodological issues and project management. The aB might be the formal supervisor (B) and/or the co-supervisor of the Master's thesis.

2.2 Formal Registration

After the starting discussion, the student has to register the thesis by the declaration of the working topic, the name of the formal supervisor, the co-supervisor and the head of the institute completing the form of the 'Study Services. The **registration** and submission of the M.Sc. thesis topic is carried out at the Study Services (<https://boku.ac.at/en/universitaet-fuer-bodenkultur-wien-boku/studieren-an-der-boku/themen-fuer-studierende>) in agreement with the executive supervisor (aB). All necessary forms (e.g., registration) are available online. A copy of the registration form must be submitted to the institute secretariat.

2.3 Ongoing support

In the course of regular discussions between the student and the executive supervisor (aB), a short report concerning the intended schedule of work (as agreed in the kick off meeting) has to be prepared by the student in written form:

- What has so far happened?
- A current table of contents of the work.
- Which difficulties have occurred?
- What are the next steps? (possibly with a deadline)
- Continuous check of the schedule for finalising the Master's thesis.

This report is to be submitted to the aB for a first check before each personal discussion.

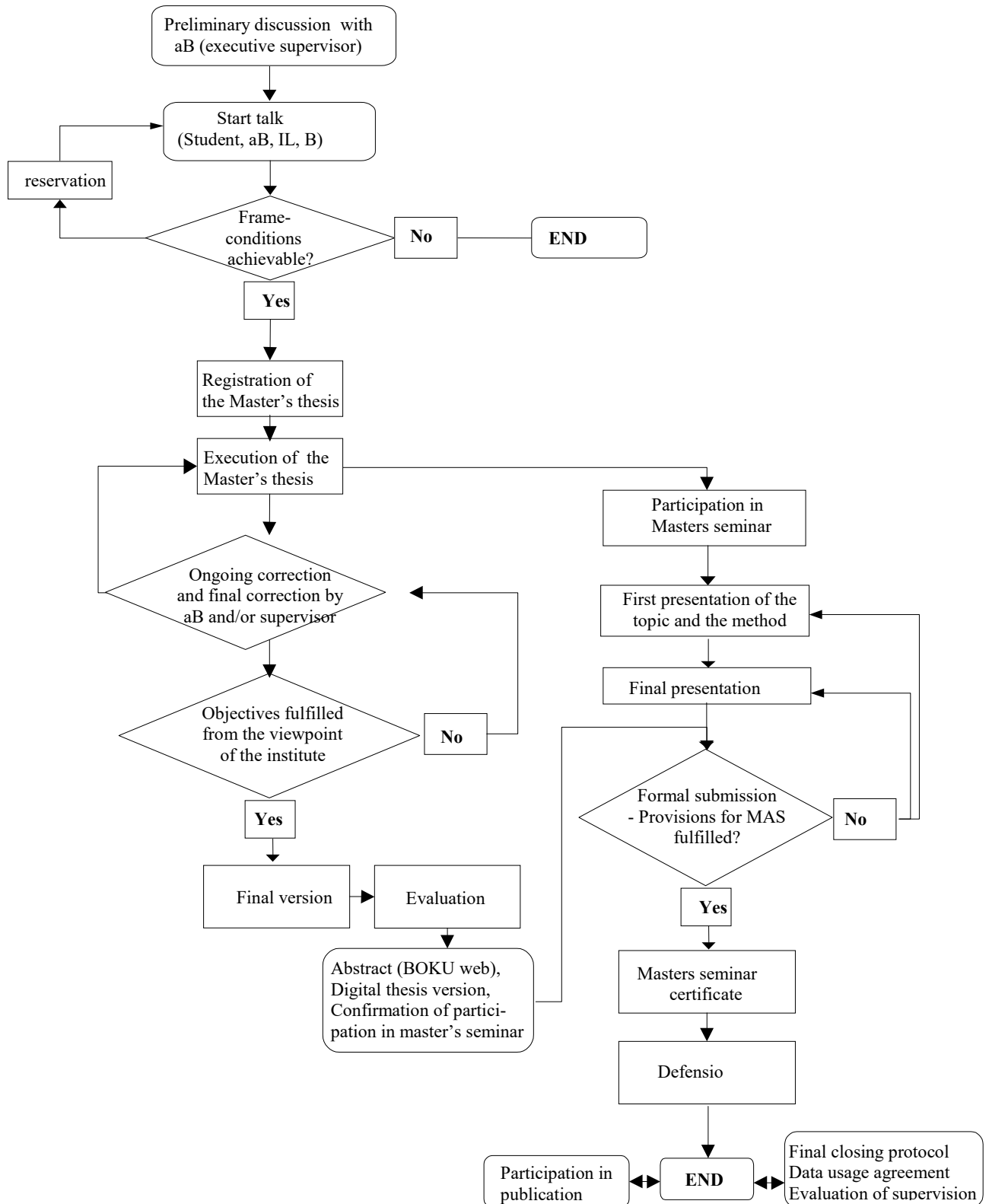


Figure 1: Flow chart for the process of conducting a master's thesis

2.4 Participation in the Master's seminar

Students are obliged to present their Master's thesis in the form of a first and a final presentation at the Masters seminar, where the method, data and essential results of the thesis are presented and justified. The Master's seminar in the summer semester takes place centrally organised as a department seminar (Master's seminar or Doctoral student's seminar) at the Department of Forest and Soil Sciences. In the winter semester it is decentrally organised as a Master's seminar of the Institute of Silviculture. At the department seminar, students in the Master's thesis phase, as well as guests and the academic staff, present their work.

In addition to active participation in the Master's seminar as a presenter, students are obliged to attend at least once the institute Master's seminar or department seminar as a listener.

Students ensure that the active or passive participation in the seminar is confirmed by the supervisor or seminar leader on the form <<**Teilnahmebestätigung_Masterseminar**>> ('Confirmation of participation in Master's seminar'). If this is not done on a regular basis, the students have to present a proof of their active and passive participation in a different way. This is a prerequisite for the secretariat to issue a certificate of participation in the Master's seminar.

In addition to the technical discussions on the respective topic, the seminars also offer the opportunity to deal with methodological questions. The described procedures, presented problems and tips from colleagues make it possible to critically reflect on one's own work.

The secretariat invites the students to participate in the seminar via e-mail and with announcements on the institute's website.

2.5 Conclusion of the work

After finalizing the Master's thesis, two hardback versions of the completed thesis and a digital version (on CD or USB-Drive) have to be handed over to the institute secretariat, one for the executive supervisor (aB) and another for the library of the institute. Two completed hardback versions of the thesis are also submitted to the Study Services, including the adequately completed form for the rating process, in order to obtain the final grade and final M.Sc. Certificate. The affidavit in the Master's thesis must be signed by the student by hand.

The **Abstract** of the finished Master's thesis has to be filled in in German and English language at the BOKU website (<https://zidapps.boku.ac.at/abstracts/>). For that purpose, the aB prepares in advance a data record within BOKU-Online. The student can edit and print this data record from each user-PC at the BOKU (this regulation is only in force for Master's theses, which are submitted at the BOKU). The formal approval of the abstract is carried out by the aB. Subsequently, the signing of the printed version is done by the student.

Once all study requirements have been met, the student may, after the Study Services have verified that all statutory conditions for graduation have been met, register for the defensio, or apply for the graduation documents to be issued without a defensio/examination involving an examination committee. The assessment by the Study Services should take place one semester prior to registration for the defensio/Master's examination or completion of the Master's course, so that any deficiencies can be remedied in a timely fashion. For this purpose, the most recent individual course plan or the most recent learning agreement, together with the transcript of records from the relevant partner university/universities must be submitted to the Study Services.

By the time that all documents for the submission (Study Services) of the Master's thesis are ready, the student can pick up the certificate for the attendance at the Master's seminar at the Institute of Silviculture. The necessary documents are:

for the Studiendekanat:

- 2 hardback versions of the thesis
- Signed online-abstract [signed by the candidate and the aB]-filled out and signed evaluation copies
- Completed form for the rating of the Master's thesis done by supervisor
- Certificate of Master's seminar handed over by secretary of the institute
- Additional documents asked from Studiendekanat (e.g. certificates of studies)

for the Institute of Silviculture:

- 2 hardback versions of the thesis
- Digital version of the thesis (including original data) and the used reference papers as CD or on USB-drive
- 1 completed evaluation form

If there is the intention to participate in the final defense, the candidates are obliged to submit all required documents to the **institute secretariat** and **Studiendekanat** at least 3 weeks before the official proposed day of the final defense. All details regarding the requirements can be found here: <https://boku.ac.at/en/studienservices/themen/infos-studienabschluss/studienabschluss-von-masterstudien/studienabschluss-von-internationalen-masterstudien>

After successful completion of the Master's thesis, the student is asked to provide a formal feedback on the supervision in the form for **evaluating the supervision** of the Master's thesis. The **Master's thesis final closing protocol** must also be submitted to the institute secretariat. Reasons for any delays in completing the Master's thesis are documented, any planned or already completed publications of the Master's thesis (in a journal or as a presentation at a conference) are documented, and it is confirmed that keys and copy cards handed out on a case-by-case basis have been returned. Furthermore, there is the possibility to register for the institute's six-month electronic newsletter.

In order to regulate the further use of the data collected in the course of the Master's thesis, the student and supervisor must sign the **data usage agreement** and hand it in to the secretariat.

The Institute of Silviculture offers you to bear the costs for two hardback copies of the Master's thesis (maximum €35 per copy). The institute secretary is the contact person to deals with the cost statement. The amount of copies, which are made within the context of the Master's thesis at the copy machine at the institute, is arranged together with the aB in the course of the starting discussion. The aB decides upon any refunds of costs to the institute.

3 Evaluation of the thesis (diploma)

The first version of the research work has some influence on the overall evaluation of the Master's thesis. Therefore also this first version of the work should be free of formal mistakes. Furthermore, the completion of the work in time has influence on the overall evaluation of the thesis.

The evaluation of the work is done according to the following evaluation criteria:

- fulfilment of the objectives
- application of the theory on a decision problem or case study
- aspects of the working procedure
 - survey and research upon the problem
 - logical sequence of the steps
 - meeting schedule and deadlines
- Master's thesis elaboration
 - structure (systematic order, sufficient material)
 - formal aspects (style, quoting, graphic processing, bibliography etc..)

4 The Layout of the thesis (diploma)

The Master's thesis has to be bound stiffly and given first and last names on the spine of the book. The master's thesis must contain a signed affidavit (text suggestions at <https://boku.ac.at/studienservices/themen/infos-studienschluss/schlussarbeiten/vorschlaege-fuer-eidesstattliche-erklaerungen>). This recommendation (see following Appendix) serves as an aid for the design and structure of the Master's thesis.

5 Appendix

5.1 First page

"TITLE"

A Thesis submitted to

the acquisition of the academic degree engineering graduate of forestry (Dipl. Ing.)/

and/or

in partial fulfilment of the requirements of the degree of
Master in forest Science / Mountain Forestry / European Forestry

Responsible person/Supervisor:

Responsible person/Co-supervisor:

Month / Year



Institute of Silviculture
Department of Forest and Soil Sciences
University of Natural Resources and Life Sciences
Vienna

5.2 Arrangement of the thesis

A difficult task of the author of a M.Sc thesis is to classify points exactly after recognition of problems. Justification of problems is necessary for the treatment of the or for the development of a proposal for getting probable solution. There are no content wise mandatory components of an arrangement, but only content wise purposeful components that one can sometimes recognize and designate in a working process.

An important section is the formulation of text headings of the thesis write up. The headings must be incorporated as briefly as possible.

During the formulation of the individual classification, it is essential to point an exact topic analysis. Often the main classification points are already contained in the subject. The assumption of this rough arrangement suggestion can be quite recommended.

Furthermore, the question is very frequently asked with careful discussion "What is the contents of the concept and which additional components you want to incorporate still to the concept of the contents?". Each scientific manipulation must have the substantial conceptions, consequences and evaluations as a basis of the research procedure.

The author must stand fully behind his thoughts and guidance so that a satisfying work might be expected. If the responsible person wants to have taken up certain real facts, he or she will refer on his or her part to it, and then this partial aspect should be prepared. The arrangement is the substantial key to the success of the work that must be on the basis of the work and control system. Therefore a sufficient expenditure is to be dedicated to the elaboration of the arrangement.

Only to the organization of the title page there is a formal regulation, which is specified in the appendix A of the available thesis (diploma) guideline.

5.3 Quotations, notes and bibliography

Scientific working requires the disclosure of all sources, which one consults for the work. One quotes also because of the verifiability, since only with the indication of all sources, the own contribution can be judged. To the quoting technology the following general criteria apply:

- Uniformity
- Accuracy
- Directness
- Appropriateness

Uniformity means that one maintains the once selected quoting technology for the entire work. Accuracy is to mean that the indication of source should be complete, so that it is easily discoverable. With directness it is required that the indication of source immediately after and not before assumption of the strange opinion effected (only if one takes over an enumerating, the indication of source before it one makes). Appropriateness is to express that the quoting technology should be as simply as possible and at the same time clearly understandable. Under this aspect the generally following abbreviations are used in connection with the quoting technology:

- Art. Article
- f. the following page
- ff. the following pages
- Eds. Publisher
- e.g. an example, among other and others authors (with more as 3 author)

In principle, one can differentiate two kinds from quotations, i.e. literal (or direct) and corresponding (or indirect) quotations. Literal quotations are such, which are taken over word by word by another source, thus also with possible errors. These quotations are marked in the text by quotation marks in the beginning and in the end. If one individual parts to omit would like inserts one for it 3 points. Corresponding quotations are in contrast to this such, with which a thought of another author with own words is represented. With the indication of source one must here the reference "compare" attach. Literal quotations should be rather short, i.e. cover maximally up to two sentences. Lining up literal quotations made possible under any circumstances liquid reading of the work and is not to be avoided therefore.

As, recommendation is not given for certain formatting, selected formatting should be described as uniform, complete and accurate format.

Quotation of sources of Internet:

On the quotation of sources of Internet, the following recommendation is spent:

[name [(editor.)] : Title, on-line one in the Internet, URL: pattern :internet-protocoll-arts/pathway([ff;] [conditions dd.mm.yy;] Inquiry dd.mm.yy [; [time belt:] hh.mm. clock

Due to the intense personality purchase to the research and for information reasons offers itself first as with traditional sources the author of the respective Internet side, about "Albach, Horst" and/or. "without authors", if no author should be indicated. In place of "w.A." one could with "(editor)" also the enterprise, which institute or the carrier of the server calls as publishers, because the server are per comparable to an anthology. Many Internet documents have a title. It informs the user of the indication of source around which it actually goes. Because of many different on-line media thereafter the instruction "on-line one in the Internet" is recommended, similarly as with magazine data "in:". Subsequently, the standard uniform resource locator "URL follows:", the address standard. Subsequently, the Internet address with the pattern of the above Internet service, the server address and the address path can follow within the server, e.g. <http://www.uni-passau.de/xxxxx/yyyy>. This indication alone would be sufficient already for a clear identifiableness of the address, not however for those the version and/or. "edition" of the text.

The serving and server address, e.g. <http://www.uni-Passau.de>, are comparable with the book title of an anthology. The indications "<>" define the entire address. The quotation will be long often over a line. Then the problem of the corrected separation results. It is advisable in principle no separation line "-" to use, because this indication can be the part of the address. A separation with sense sections is helpful. With separation of the address part can be separated in each case before "/". Like that it is recognizable that the following part belongs still to the address.

Example:

Breuer, J.: Quote from sources in the InterNet, on-line ones in the InterNet: URL: <http://ourworld.compuserve.com/homepages/bleuel/ip-zit.htm> (conditions 21.12.1996; Call 6.11.1997).

5.4 Illustrations and tables

Necessary abbreviations are explained under the illustrations and tables. Each illustration and table has a number and a title with reference. Each illustrations and tables should be referred to in the text. The figure caption of tables is always situated above the table, the figure caption of figures is always situated below the table.

In this context you might use the **automatic numbering and heading feature of your MS Word program** in order to allow an easy update of the headings, figure captions and the contents overview.

5.5 Referring to sources of literature

Relevant technical and scientific literature, web site addresses might be used for the layout and structure of the M.Sc (Diploma) thesis according to one of the following formats:

- Huss, J. 1984: Manual for the preparation of thesis (diploma) and thesis in the forest science and used fields of activity, Frankfurt (Main): Sauerländer, VII, 117 S. ISBN 3-7939-0640-X
- Krämer, W., 1995: As I write seminar -, to exam and thesis (diploma): a guidance for scientific working for studying all fan on universities, professional schools and polytechnical academies, 4., advanced and updated edition, Stuttgart [other persons] : Fischer, 199 S. ISBN 3-437-40342-7
- Standop, E. 1994: The form of the scientific work, 14. edition, complete again treatment and advanced of Matthias's L G. Meyer, Heidelberg [other persons] : Source & Meyer, 213 s. ISBN 3-494-02216-X

Web addresses (in german):

- references to create and organize a scientific work <http://www.uni-mannheim.de/fakul/phil/lsew1/Englisch/Unterseiteneng/wissensc.htm>
- organization of a scientific work <http://merlin.wiwi.uni-bremen.de/institute/iiso/textgest.html>
- the handbook "scientific working" (a pdf file)
- <http://didaktik.cs.uni-potsdam.de/Lehre/WissArbeitenHinweise/> Wagner.pdf
- references, suggestions and recommendations" (Institute for social sciences (Katrin Bialek, Ralf Clasen, Petra Stykow)
- <http://www2.rz.hu-berlin.de/sowi/studium/beratung/wissarb.htm>
- manual for the letter of a scientific work for students and other interested person <http://www.arbeitschreiben.de/>
- scientific working in the WWW. Searches and finding in the InterNet <http://www.hosenfeld.de/wisswww/> for appropriate problem definition