



Guidelines for the preparation of a master thesis

Supervision, formalities, submission

Version 1 (September 2018)

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Thesis Guidelines for writing a master's thesis / Master Thesis Department of Viticulture and Pomology, Department of Crop Sciences, BOKU Vienna

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Dear Master's Degree Candidates –

The Master Thesis is an essential part of your master program. By successfully writing the thesis, you proof your scientific qualification based on your ability to independently carry out a scientific work, in coordination with your supervisor.

This guide is intended to assist you in the planning and execution of the Master Thesis.

Often, the Master Thesis is your first publication, which will also play a role in your future career and is also important to you, personally. For this reason, it should be written with the utmost care, to the best of your ability and with a "good scientific practice".

We would like to support, challenge and encourage you in writing your Master's thesis and wish you success, pleasure in researching and documenting your scientific work, in the discussion and interpretation of your results and in your personal conclusion!

The Viticulture and Pomology Team

1. Master Thesis – Topics & Assignments

The topics for Master Theses of the Department of Viticulture and Pomology are embedded in the scope of our current research foci and projects. Current thesis topics are published online on the homepage of the department ¹ and on BOKU's thesis topics platform ².

In principle, master theses can be written in German or in English language, some topics are only offered in English.

The Master Candidate will schedule an initial meeting with their respective supervisors and the head of the department/division in order to get to know each other, substantiate the scientific issues, plan your time frame, and generally discuss all open points and questions. Candidates should then decide as soon as possible on a topic. In the case of positive feedback, the topic will be marked as assigned and the formal registration of the Master Thesis may take place.

2. Registration of the Master Thesis

The registration of the Master Thesis is done in coordination with the department/division management and the thesis supervisors by submitting the completed form to the study department (Studienabteilung).

The form Registration of the Master Thesis (for fields of study with presentation or defensio) is available online ³.

The Master Candidate will complete the form, obtain the required signatures and submit the form original to the study department. A copy of the form, signed by the dean of studies, is sent by the student to the division's secretariat ⁴ (scan via e-mail) and filed there for documentation.

¹ http://www.dnw.boku.ac.at/wob/master-thesis-angebote/

http://www.boku.ac.at/zid/themen/teach-learn/studium-meldung-weitermeldung-abschluss/abschlussarbeitenboerse/

³ http://www.boku.ac.at/studienservices/themen/infos-tudienabschluss/abschlussarbeiten/masterarbeiten/

⁴ Abteilung Wein- und Obstbau, Frau Brigitte Hasenauer, UFT Tulln, Raum E2.3.197 | obstwein@boku.ac.at

3. Research Proposal - start your Master Thesis

In the kick-off meeting, the first framework conditions for the Master Thesis are worked out and defined together with the supervisors and head of department/division. Essential points to be covered are:

- definition of scientific issue, objective of the master thesis
- timeframe, milestone dates
- workplace (office, laboratory) and lab book (will be provided by the department/division)
- laboratory regulations and safety training introduction
- confidentiality and handling of the data, IP/copyright for the obtained data
- project description (Research Proposal)

The first important step of any Master Thesis is the preparation of a project description. The preparation of a project description is elaborated in the context of the seminar Viticulture Pomology Journal Club (LVA 958334).

Each Master Candidate must submit a **Research Proposal** within the first 6 weeks after the topic has been assigned or after the kick-off meeting.

The Research Proposal (first version) is part of the immanent examination of the Master Thesis.

Among other things, the Research Proposal should cover the following points:

- Substantiation of the problem, delineation of the topic
- Defining the topic (big questions, small questions, how are the questions incorporated into the current knowledge, where are the new aspects)
- Formulating the hypothesis
- Material and methods: experimental plots, sampling/measurements, analyses, statistics, open points
- Expected Results
- Weaknesses, expectable risks, "fallback" research plan
- Time: practical implementation, literature search, thesis writing, vacation time, coordination with supervisors.

The supervisors have an advisory function, evaluate the first version of the research proposal and provide further input.

4. Supervision and execution of work, data management

The Master Candidate will meet with their Supervisor regularly during the execution of the Master Thesis. Work steps are planned and executed in coordination.

Once a month, a coordination meeting is to be scheduled with the assessing supervisor (habilitated member of BOKU teaching staff).

Students have to adhere to the laboratory regulations, keep the documentation detailed and correct, seek consultation with their supervisors and integrate themselves into the daily routine of the lab.

All data must be recorded directly in the lab book and stored on the specified server. Data collected for the thesis are, to the extent of work developed and planned at the department/division, are property of the Division of Viticulture and Pomology.

Publications resulting from these projects and their authorships must be coordinated between supervisors and student.

5. Masters Seminar and Tutorial

Students who are required to complete a mandatory **Master's Seminar** must register in time for the Master's seminar of the Department of Crop Sciences, offered both in the winter and summer terms. Prerequisite for a positive seminar completion is the participation in the preliminary discussion and the poster presentation at the end of the respective semester. Each student must present a poster of his Master Thesis in this seminar.

The Division of Viticulture and Pomology also offers **in-house tutorials**. These are scheduled four times each semester and are **recommended for all Master students**.

Here, Master students present their research questions, report on the progress in the execution of the work and put their topic in the focus of professional discussion with scientists of the department and other master students. The presentation of ideas, questions and methodological aspects as well as the critical scrutiny by colleagues, shall encouraged and enhanced reflection of the individual work.

The tutorials also serve as network meetings for all Master students of the Division of Viticulture and Pomology.

6. Creating the Master Thesis

Already during the practical work, writing of individual chapters of the Master Thesis can begin. This first draft of the Master Thesis should be coordinated with the supervisors.

a. Formal requirements for the Master Thesis

Font and font size: Times New Roman, 12 pt

Headings: 12-16 pt Line spacing: 1.5

Main text: justified text

It is recommended to comply with page margins for optimal printing and subsequent binding (top: 2.5 cm; bottom 2.0 cm, left 3.0 cm, right 2.0-2.5 cm).

Tables are provided with headings, illustrations with captions. Font should be the same as in the main text, font size 11 pt, one line spacing and with consecutive numbering. There must be a reference to each figure and table in the text.

The pages are to be numbered consecutively, table of contents and other directories (table index, list of figures), placed before the main text, are paginated with Roman numerals, Arabic numerals thereafter.

b. Structure of the Thesis

As a rule, a Master Thesis is divided into the following sections

- Title page
- Statutory declaration
- Acknowledgments (optional)
- Abstract
- Figures
- Tables
- Abbreviations
- Table of Contents
- Introduction
- Literature review
- Materials and Methods
- Results
- Discussion
- Summary
- Bibliography
- Appendix

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Suggestions for a **statutory declaration** are available on the BOKU web page "Suggestions for affidavits" ⁵.

The **Introduction** usually covers 1-3 pages and describes the problem that formulates questions and hypotheses. The chosen solution to answer the questions and the expected results are described. The introduction should motivate to read the whole thesis.

The **Literature Review** covers the topics relevant to the subject in order to describe and delineate the question, the complex of topics and the understanding of the subsequent results. It is important to have an up-to-date and international overview of the subject area, whereby attention should be paid to a targeted presentation of the topics relevant to the work. The coordination and discussion with the supervisors are necessary for the reflected scientific discourse.

The actual research work is described in the **Materials and Methods** section. The collected data are shown in the **Results** part. The presentation of the results should be precise, as well as easy to read and understand. All data must be calculated using the appropriate statistical methods in order to facilitate valid statements on effects and differences. The statistical calculations are to be carried out by the students in coordination with the supervisors. The results must also be described in the text and reference must be made to the figures or tables.

In the **Discussion** part, the individual research results are related to the current state of knowledge in literature. Results may confirm already existing knowledge, or not. It is important to juxtapose and embed the results and to see the research work as a whole, and not just discuss individual methods and their results.

In the **Summary**, the most important aspects of the work are presented briefly and succinctly. The summary contains 1-2 pages and is longer than the **Abstract**, which is usually limited in word count.

The **Bibliography** must be consistent and complete. Correct citation is essential.

All theses are checked with software for plagiarism issues.

⁵ http://www.boku.ac.at/en/studienservices/themen/infos-studienabschluss/abschlussarbeiten/vorschlaege-fuer-eidesstattliche-erklaerungen/

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Citation guidelines

On design and preparation of scientific papers specific literature is available. Examples:

Huss, J. 1984: Leitfaden für die Anfertigung von Diplomarbeiten und Dissertationen in der Forstwissenschaft und verwandten Fachgebieten, Frankfurt (Main): Sauerländer, VII, 117 S. ISBN 3-7939-0640-X

Krämer, W., 1995: Wie schreibe ich eine Seminar-, Examens- und Diplomarbeit: eine Anleitung zum wissenschaftlichen Arbeiten für Studierende aller Fächer an Universitäten, Fachhochschulen und Berufsakademien, 4., erw. und aktualisierte Aufl., Stuttgart [u.a.]: Fischer, 199 S. ISBN 3-437-40342-7

Standop, E. 1994: Die Form der wissenschaftlichen Arbeit,14. Aufl., vollst. neu bearb. und erw. von Matthias L. G. Meyer, Heidelberg [u.a.]: Quelle & Meyer, 213 S. ISBN 3-494-02216-X

c. References

"In your scientific work, you will use other works for demonstration, evidence, to justify or refute the hypotheses. You will refer to other work. Sources are divided into primary and secondary. Primary sources are, for example, original records such as files, documents, handwritten records, contracts, etc. Secondary sources reflect on primary sources, i.e. are interpretations, assessments of these. Generally, sources can be published or unpublished." ⁶

The following general criteria apply to citation:

- Uniformity
- Accuracy
- Directness
- Expediency

Uniformity means that you consistently maintain the citation style chosen for the entire work. **Accuracy** means that the citation should be complete for easy retrieval. With **directness** it is required that the source is given immediately after (not before) adopting the opinion of others (only if one takes over an enumeration, the source is given before). **Expediency** is to express that the citation technique should be as simple as possible and at the same time clearly understandable.

There are literal and analogous quotations. Literal citations are taken literally from the source, these quotations are marked in the text by quotation marks at the beginning and end. In the case of analogous quotations, the thoughts of another author are presented in your own words.

⁶ Translated from http://www.univie.ac.at/ksa/elearning/cp/schreiben/schreiben-37.html

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Sources must be complete. **Within the text,** as a rule the main author and the year of publication are cited:

Only one author: ... (Mustermann, 2018)

2 authors: ... (Mustermann and Musterfrau, 2018) More than 2 authors: ... (Mustermann et al 2018)

There are (quasi) standards for citation styles, as published by scientific journals, which differ in details. The citation style is chosen individually, or agreed upon with the supervisor.

The **Bibliography** contains all information on sources used. Again, a uniform style is to be chosen. The following information must be provided.

Basic structure:

- Name of author: All authors' names
- Year of publication
- Title of work
- Source, journal, book, edition, edition
- Standard numbers, as ISBN, ISSN, etc.

Use of a citation program is recommended. 7

Citation Style Examples

Harvard

FORNECK, A., WALKER, M. & BLAICH, R. 2001. An in vitro assessment of phylloxera (*Daktulosphaira vitifoliae* Fitch)(Hom., Phylloxeridae) life cycle. *Journal of Applied Entomology*, 125, 443-447.

GRIESSER, M., LAWO, N. C., CRESPO-MARTINEZ, S., SCHOEDL-HUMMEL, K., WIECZOREK, K., GORECKA, M., LIEBNER, F., ZWECKMAIR, T., PAVESE, N. S. & KREIL, D. 2015. Phylloxera (*Daktulosphaira vitifoliae* Fitch) alters the carbohydrate metabolism in root galls to allowing the compatible interaction with grapevine (*Vitis* ssp.) roots. *Plant Science*, 234, 38-49.

APA 6th

Forneck, A., Walker, M., & Blaich, R. (2001). An in vitro assessment of phylloxera (*Daktulosphaira vitifoliae* Fitch)(Hom., Phylloxeridae) life cycle. *Journal of Applied Entomology*, 125, 443-447.

Griesser, M., Lawo, N. C., Crespo-Martinez, S., Schoedl-Hummel, K., Wieczorek, K., Gorecka, M., Liebner, F., Zweckmair, T., Pavese, N. S., & Kreil, D. (2015). Phylloxera (*Daktulosphaira vitifoliae* Fitch) alters the carbohydrate metabolism in root galls to allowing the compatible interaction with grapevine (*Vitis* ssp.) roots. *Plant Science*, 234, 38-49.

Citation of Internet sources

⁷ http://www.boku.ac.at/bib/services/literaturverwaltung-zitieren/

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For the citation of internet sources the following recommendation is issued: [Name [(Hrsg.)]: Title, Online in the Internet, URL: <Schema: // Internet Protocol Parts / Path> ([ff .;] [Stand dd.mm.yy;] Query dd.mm.yy [; [timezone:] hh.mm. clock])]resorted In general, however, "instable" sources and information from the internet should be used only as an exception.

Use of figures and tables

Figures and tables from other sources must not be used directly. The permission of the author or the publisher must be obtained in advance and documented in the thesis' appendix, the source must be indicated. It is therefore appropriate to adopt essential information from figures and tables and design it yourself.

In these cases, the reference must be: "modified from AUTHOR (year)."

List of figures and tables is to be created with running numbering of the figures or the tables, the titles and the page number.

d. Correction of the Master Thesis

The first version of the Master Thesis is reviewed by the supervisors and most of the time there will be comments and suggestions for improving the thesis. Incomplete work will not be pre-corrected. The Master Candidate will implement the suggestions in their work, followed by the examining supervisor's assessment of the thesis. The examining supervisor can either suggest further improvement or assess the thesis. The decision is up to the examining supervisor. It should be noted that already the first version is included in the assessment. The version submitted after the implementation of the examining supervisor's recommendations is the final version of the Master Thesis.

Every scientific activity must be based on one's own "ideas of the essential, conclusions and judgements". The author must fully back his/her thoughts — only then it will be a satisfactory piece of work. In case a supervisor wishes a specific aspect to be highlighted or focussed on, they will point it out on their own initiative, and then this aspect should be elaborated.

Questions such as "what's missing" or "how many pages do I have to write" are not acceptable because they do not bear witness to independent thought and consideration, but they are basic prerequisites for writing a Master Thesis.

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e. Cover Template:

The cover page of the thesis contains the following data and wording:

"THESIS TITLE"

Master Thesis

by

Name Surname

to obtain the Degree "Master of Sciences"

Supervisor:

Co-Supervisor:

filed on

dd.mm.yyyy

Division of Viticulture and Pomology

Department of Crop Sciences

University of Natural Resources and Applied Life Sciences, Vienna

7. Assessment of the Master Thesis & Registration for the Defensio

Information on formally completing your Master's degree you may find on the BOKU web page "Graduation from Master's degree programmes". 8

Defensio Registration requirements

- You must have passed all exams successfully
- The Master Thesis has been assessed and carries the university library stamp of approval
- All necessary forms completed and signed
- To register for the Defensio you need two bound copies of the Master Thesis, as well as one bound copy per supervisor.

Assessment of the Master Thesis

The form "Assessment form for a Master Thesis" is used. Evaluation categories are: problem formulation, research question, research design, methodology, research results, analysis/interpretation/discussion/conclusions, bibliography, quality of wording/linguistic presentation and structure of work. The evaluation form is filled out by supervisors and te form original must be submitted to the Study Service Center when registering for the Defensio. together with all other documents. A copy remains with the Secretariat of the Division of Viticulture and Pomology.

⁸ http://www.boku.ac.at/en/studienservices/themen/infos-studienabschluss/studienabschluss-von-masterstudien/

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Master Candidates will perform the **Thesis abstracts data entry** after completion of the thesis and before the degree.

The abstract of the finished master thesis is to be entered in German and English in BOKUonline. As soon as the master's thesis has been registered in the study department, the study department will create a corresponding record in BOKUonline. Once approved by the Dean of Studies, the Abstracts dataset is automatically available in the Abstracts application and the student can complete the data entry (applies only to master theses submitted to BOKU). After a first approval by the student, the final release of the abstract will be done by the formal supervisor. Subsequently, the written signature of the abstract will be done by the student (s). ⁹

Registration for Defensio

Required form: "Anmeldung zur Defensio / Application for a defensio"

When filing for defensio, the econd examiner at the Defensio has to be specified, in agreement with the supervisor.

Obtaining the signatures on the registration form is the responsibility of the Master Candidate. She/he will submit the original form to the study department, plus a form copy to the secretariat of the Division of Viticulture and Pomology

Registration for the defensio must be made at least 3 weeks before the scheduled date.

Evaluation of the Defensio

Required form:

"Bewertungsbogen Defensio Masterarbeit / Assessment of Master's Thesis Defensio"
To be completed with personal data and procured on the date of the defensio by the candidate. The original form is sent to the study department by the Secretariat of the Division of Viticulture and Pomology.

For students of the international master program Viticulture Enology and Wine Economics additional regulations apply. These are available on the web pages of Division of Viticulture an Pomology. 10

Applicable are BOKU's guidelines for the defensio of a Master Thesis "Richtlinie für die Defensio einer Masterarbeit an der Universität für Bodenkultur Wien" (German language only). 11

http://www.boku.ac.at/en/zid/themen/teach-learn/studium-meldung-weitermeldung-abschluss/abschlussarbeiten-abstracts-erfassung/

https://www.dnw.boku.ac.at/wob/uebersicht-lehre-wein-und-obstbau/lehre-weinbau/internationales-masterprogramm-weinbau-oenologie-und-weinwirtschaft-woew/prozedere-masterarbeit/

http://www.boku.ac.at/fileadmin/data/H01000/mitteilungsblatt/MB_2015_16/MB16/Richtlinie_Defensio_M asterarbeit_2016.pdf

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This document is based on the guidelines for the supervision of master theses (Richtlinie zur Betreuung von Masterarbeiten) of the BOKU Institute of Silviculture, Department of Forest- and Soil Sciences (Neumann/Vacik/Hasenauer, 2017).

Wien/Tulln, September 2018 Univ.Prof. Dr. Astrid Forneck Division of Viticulture and Pomology