# Bachelor's Thesis Guideline

# B.Sc. Molecular Ecosystem Sciences

Faculty of Forest Sciences and Forest Ecology

Georg-August-University Göttingen

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# MES Bachelor's Thesis Guideline

MES E	Bachelor's Thesis Guideline	. 1
Bache	elor's thesis guideline	3
1.Sco	pe	3
2.Structure		3
I.	Cover	3
II.	Table of Contents	3
III.	Abstract	3
IV.	Introduction	3
V.	Materials and Methods	3
VI.	Results	. 4
VII.	Discussion	. 4
VIII.	Conclusion	. 4
IX.	Bibliography	. 4
Χ.	Affirmation	. 4
3.Forr	3.Format	
4.Text		
5.Uni	rs, Abbreviations, and Spelling	. 4
6.Citation Techniques		. 5
I.	Paraphrasing/Indirect Quotation	. 5
II.	Verbatim/Direct Quotation	.5
III.	Reference	. 5
IV.	Citation within a Quote	. 5
7.Plagiarism		. 6
8.Bibl	Bibliography	
9.Tabl	.Tables	
10.lm	ages (Photos, Line Drawings, Diagrams)	.8
11 Su	I 1 Submission	

# Bachelor's thesis guideline

These tips will help guide you through the writing standards of scientific journals. We see it as an important educational goal to familiarize you with these requirements.

# 1. Scope

The bachelor's thesis is to be submitted to the Examination Office in triplicate (for further information, see the Bachelor's Examination Regulations of the Faculty of Forest Sciences and Forest Ecology). The bachelor's thesis should be approximately 20 pages in length (DIN A4, including tables and illustrations).

## 2. Structure

The bachelor's thesis should be structured according to the following:

#### I. Cover

- Title
- Students name
- Bachelor's Thesis for the Faculty of Forest Sciences and Forest Ecology
- Georg-August-University Göttingen
- Date of Submission
- Supervisors

#### II. Table of Contents

- Headings of the chapters and sections with corresponding page numbers
- Max. three levels of subheadings can be used (ex: 2, 2.1, 2.1.1)

#### III. Abstract

- Both English and German versions are needed
- Summarizes the objectives, methods, results, and conclusions

#### IV. Introduction

- Max. two pages
- Overview of the literature (including citations for each statement)
- Current state of the research
- Objectives and hypothesis of the study

# V. Materials and Methods

- → Can be omitted in the case of exclusively literature-based work
- If applicable, description of the study area, location, and size
- Description of experimental setup/design and methods
- Description of statistical analysis
- Text should be detailed enough so that any uninvolved person could repeat the experiment

#### VI. Results

- State findings from the study in relation to the formulated hypothesis
- Quantitative data is normally shown in tables and diagrams
- No references in this part

#### VII. Discussion

- Analysis of the results in relation to the objectives and formulated hypothesis
- Make references and comparisons with existing literature
- Confirm or refute your hypothesis

#### VIII. Conclusion

- Often included in scientific papers, but not a necessary part of the bachelor's thesis
- A summary of the whole work
- Interpretation and re-evaluation of results
- Consequences
- Recommendations for further studies in the field

# IX. Bibliography

A list of all the sources cited

#### X. Affirmation

- On a separate page, you must affirm that you did the thesis work on your own
- The affirmation need to be signed by the student in each hard copy sample

"I hereby assure that this thesis was exclusively made by myself and that I have used no other sources and aids then the ones enlisted."

\*\*Date/ Signature of Student\*\*

# 3. Format

- The margins should be 2(-3) cm; left margin (binding side) should be 3(-4) cm
- Page numbering begins with the introduction
- Text should be 1.5 spaced
- Font: 12-point, Times New Roman (if another font such as Arial is chosen, the font size should be smaller)
- Justified text alignment is recommended

# 4. Text Highlighting

- Scientific names should be italicized
- Longer paragraphs of text should be separated by creating smaller sections or by highlighting essential terms (bold or italicized, not underlined)

# 5. Units, Abbreviations, and Spelling

Separation of decimal numbers with a period in English (e.g. 3.14)

- For decimal numbers less than one, put a zero before the comma
- Larger numbers should be separated with periods or spaces (e.g. 29.300.000 or 29 300 000)
- Symbols and technical units should be italicized
- Leave a space between numbers and units (e.g. 3 cm, 21 °C, 14 %)
- Exponents are to be used with combined units; multiplication signs are not needed
  - o  $m^3 ha^{-1} = cubic meter per hectare$
  - o kg ha<sup>-1</sup> a<sup>-1</sup> = kilogram per hectare and year
- Numbers 2 and higher can be written as digits
- Either British or American English can be used, but it should stay consistent for the entire thesis
- For English spelling, refer to (Cambridge Dictionary)

# 6. Citation Techniques

Be consistent with your citation formatting style – always use the same style in your text references and bibliographic references. Don't copy ready-made references.

The German citation system recognizes four different kinds of citations:

# I. Paraphrasing/Indirect Quotation

- Most commonly used citation technique where text is restated in your own words (paraphrased)
- Only technical terms are maintained (e.g. (Meyer, 1998))

## II. Verbatim/Direct Quotation

- Reserved for exceptional cases when the exact wording is needed
- Quotation marks used at the beginning and end of the quote
- When a portion of the original text is left out, square brackets (e.g. [...]) are inserted
- When words are added or changed for better understanding, the new word(s) is/are also put in brackets (e.g. [is])

# III. Reference

- Used to refer to secondary literature or other related sources
- The reference is marked with "cf." (ex: cf. Röhring et al. (2006))

# IV. Citation within a Quote

- Used in exceptional cases when the original source of a quote cannot be found, but instead only a secondary source that cited the text itself
- Citation example: Watt (1919, according to Ellenberg and Leuschner 2010, p. 119)

Quotations must be cited properly within the text, with the name of the author and year of publication in parentheses (Name-Date System).

Some authors (Spurr and Barnes, 1985, Ellenberg et al. 1986, Ellenberg 1996) pointed out that ... If the author appears in the text, only the year of publication has to be in round brackets.

Kimmins (1997) showed that ...

For publications written by more than one author, only the first one appears in the citation, followed by et al. (but all authors must be listed in the bibliography).

Collet et al. (2001) showed ...

In the case that various authors are cited in the same passage, the authors are arranged in chronological order. For citations of different publications from one author with the same publication year, the quotation is marked with a suffix (a, b, etc.).

Smith (1979a, b) proved that ...

There are several reference management software programs, many of which are free (e.g. zotero, JabRef, Bibsonomy, Docear, Mendeley). At the Georg-August University, you have the possibility to use the Citavi campus license. You can get more information and attend courses on the use of Citavi at the SUB Göttingen: https://www.sub.uni-goettingen.de/en/learning-teaching/academic-work-tools-and-methods/reference-management/

# 7. Plagiarism

Plagiarism is the imitation of another's intellectual work that is claimed to be one's own. All texts and thoughts (even ideas expressed orally) literally cited from others have to be given credit as such: author(s), year, and page number. The same applies for literal translations of foreign texts. Diagrams and tables taken from another author and even one's own text already used in other publications must be cited as well. If plagiarism is found in a thesis, it will count as "not passed"/ "failed". Plagiarism is an offense in Germany! Always make sure to cite correctly.

# 8. Bibliography

The literature cited in the text should be compiled at the end of the thesis in the bibliography. Any further literature is to be omitted. The works are arranged in alphabetical order according to the last name of the authors. For two or more works by the same author, list the publications in chronological order.

There are different styles for the structure of the bibliography. It is advisable to adhere to the specifications of scientific journals. There are no fixed rules for the use of punctuation marks (period, comma, colon, etc.). However, as a rule, use punctuation only as necessary and as little as possible. It is especially important that a uniform style is adhered to.

For articles from scientific journals/periodicals, cite as follows:

- Author/authors use initials of first names
- Publication year
- Title (English translation of a foreign article other than German, French or English should be put in square brackets)
- Name of the magazine
- Page numbers
- Language (if not German, French or English)

Thysell D.R., Carey A.B. 2001. Manipulation of density of *Pseudotsuga menziesii* canopies: preliminary effects on understory vegetation. Can. J. For. Res. 31, 1513-1525

For articles from collections (books, conference tapes), cite as follows:

- Author(s) (same as periodicals)
- Year of publication
- Title of article
- Publisher (optional)
- Place of publication
- Page numbers

Evers F.H., Gussone H.-A. 1991. Ernährung und Düngung der Fichte. In: Schmidt-Vogt H. (Hrsg.) Die Fichte Bd. 11/3. Hamburg u. Berlin, 524-599

## For books, cite as follows:

- Author(s) (same as periodicals)
- Year of publication
- Title
- Publisher (optional)
- Place of publication

Kimmins J.P. 1997. Forest Ecology. 2nd ed. Upper Saddle River, New Jersey

#### 9. Tables

- Tables should be understandable without reading the text
- Title: every table should have a title with a short description of the content being conveyed (if adopted from another author, give source)
- Abbreviations used in the table should be explained either in the table or in a footnote
- Heading (upper row of the table): description of the content of every column including units (in round brackets)
- Design should be as discreet as possible only use lines where they are really necessary
- Lines above and below the table heading and below the last row are usually sufficient

# 10. Images (Photos, Line Drawings, Diagrams)

Images are generally eye-catchers that the reader often looks at first. They should be clear and understandable without any explanation.

- Colors should only be used if necessary for the content being shown
- Avoid decorations such as shadows, frames, etc.
- The image must be linked with the text; within the text, the reference to the image is labeled with the number of the image
- The results presented in tables or images must be explained in the results chapter. A table or image should not be included if it is not explained in the text!
- Diagram axes should always indicate numbers and units
- For several diagrams of the same kind, use the same unit size
- The image caption appears below the image, with the image number, a short description of the image, and if necessary, the source
- Abbreviations, markings, and lines used in the image must be explained in a legend

## 11.Submission

#### **NOTE:**

Due to the Corona pandemic the B.Sc. thesis needs to be uploaded digitally via FlexNow. Please find more information in this video.

In addition to the upload in FlexNow, one printed copy has to be send via physical mail to:

Prüfungsamt Forst Selma Koç Büsgenweg 5 37077 Göttingen

To register your thesis, fill out the form "Allocation of a bachelor's thesis" with your supervisors 9 weeks before you hand in your thesis at the examination office. (Allocation form: LINK)

- Submit the signed and filled out form (scanned via Email or via mail) at:
- Prüfungsamt Forst / Ms. Selma Koç

Tel.: +49 551 / 39-33 405 Mail: skoc@gwdg.de

Room: 1.128, Büsgenweg 5, OG

Office hours: Monay to Thursday: 9 12 Uhr

- A German abstract and the translation of the title into German must be included
- Hand in three identical paper copies to Ms. Koç, Büsgenweg 5, room 1.128
- Send one merged PDF file of your thesis work to Ms. Koç at email (skoc@gwdg.de) (name of PDF should include your name and matriculation number).

- Only glue-bound hard copies are accepted
- You can have your thesis printed and bound in almost any copy shop in Göttingen. Just google "copy shop Göttingen" to find some offers. Ask how long it will take to have your copy ready to make sure you meet the deadline.
- The first page should be white. Don't print the title on the cover.
- Don't forget to sign your thesis → Affimration! All three samples!!!
- The following declaration has to be added to the thesis (last page): "According to § 7 (5) of the Bachelor's MES Examination Regulations, I hereby confirm, that I have written the present thesis independently and without making use of any other sources and tools than those that are indicated. I assure that the written version of this thesis corresponds to the digital version."
  - Date, Signature of Student
- If the submission date is a weekend or a public holiday, you have to hand the thesis in by mail. The postmark counts as the submission date (not the day the thesis arrives at the faculty), but it is better to hand in the thesis in advance.