

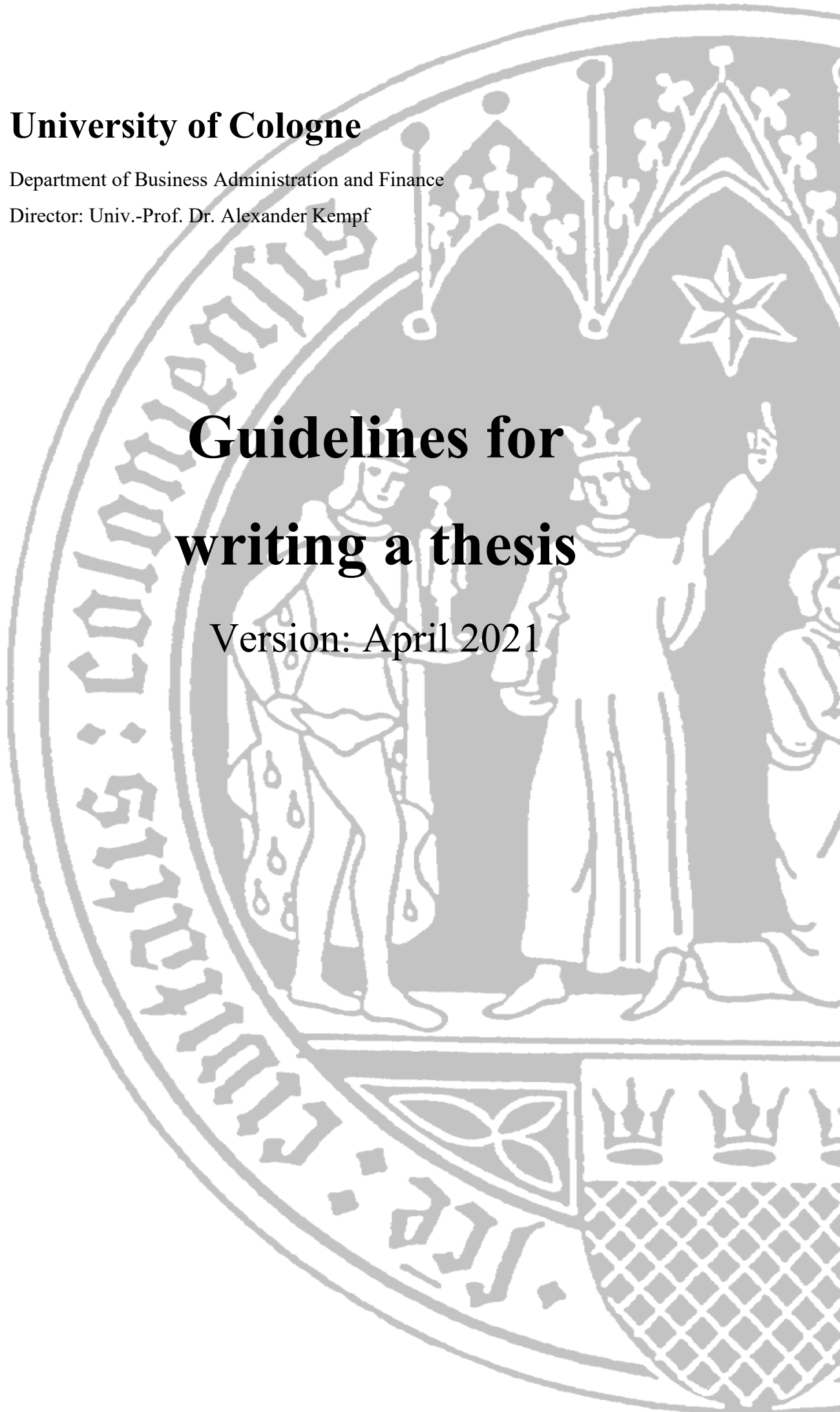
University of Cologne

Department of Business Administration and Finance

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Guidelines for writing a thesis

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Preface

Writing a thesis is a challenging task for most students. Therefore, we have put together this little brochure to help you writing a seminar, bachelor's, or master's thesis at our department. The information provided should guide you on how to transfer your thoughts and ideas into a thesis that meets scientific requirements.

If you still face problems during the writing process that you cannot solve with the information provided, please contact your supervisor.

I wish you much success and joy in writing your thesis at our department.

Univ.-Prof. Dr. Alexander Kempf

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1. Requirements regarding the content

1.1. Objective

In the introduction, you should clearly describe the objective of your thesis. What is the problem addressed? Why is it important to address this problem? It is important for the reader to know where you want to go in your thesis.

1.2. Outline

The outline should help the reader to get a first idea of how you want to achieve the objective of your thesis. For the reader, it is like a map that shows the path to the destination of your thesis. Therefore, make sure to include only sections needed to arrive at your destination.

Subsections allow you to answer the question of the main section in several steps. Therefore, subsections only make sense if there are at least two subsections. For example, Section 3 might be entitled “Test of Hypotheses”. Then you could have a Subsection 3.1 “Test of Hypothesis I” and a Subsection 3.2 “Test of Hypothesis II”. If needed, you can also introduce sub-subsections (e.g., 3.1.1, 3.1.2, 3.1.3) but make sure that you need them. You might confuse the reader with a map that provides too many details.

The outline has to be transferred literally to the thesis (chapter headings).

1.3. Literature

By writing a thesis, you have to show that you are able to work on a given topic in a scientific way. Therefore, the first step is to study the scientific literature that is relevant for your work. Make sure that you cover all papers/books that are important for your topic, but avoid citing irrelevant ones.

1.4. Quality of reasoning

To convince the reader, the reader has to be able to follow your train of thoughts. Therefore, describe your thoughts and arguments as clearly as possible.

If you make a conclusion, provide a good reasoning for that conclusion. What are the assumptions you are starting with? Then explain to the reader step by step how you come from

the assumptions to your conclusion. If you leave out interim steps, the reader might not be able to follow you. Conclusions must be substantiated and logically compulsory from the assumptions and arguments!

All statements you make have to be consistent with the definitions and assumptions you use. Therefore, be always aware of your definitions and assumptions and disclose them in your thesis.

In your reasoning you may use your own arguments and/or arguments taken from the literature. If others' thoughts are adopted, you have to make sure that you reproduce them with the correct meaning and a correct citation (see 2.3). However, other authors' opinions should not be reproduced without criticism, but critically questioned so that they can be used as the basis for the development of your own train of thought. Still, critical remarks must be well-founded and claims proven.

1.5. Contribution

At the very least, you should provide an independent and comprehensive collection, selection, and scientifically sound presentation and structuring of external, topic-related knowledge. This includes that you critically evaluate other authors' assertions.

It is even better if you are able to add new insights to the scientific literature. However, keep in mind that you need to back your new insights with empirical evidence or formal proofs. Otherwise, it is only an unsubstantiated claim, not a new insight.

2. Formal requirements

2.1. Writing style

To make sure that the reader understands your thesis properly, write your thesis in a precise and comprehensible way. Where appropriate, you should use active phrase ("Sharpe (1964) shows...") rather than passive phrase ("In Sharpe (1964) it is shown..."). Style and tense should be consistent throughout the thesis.

Please avoid lengthy and confusing discussions. Very long sentences and subordinate clauses might confuse the reader. Avoid them! Use foreign words only if needed. Orotund language

and exaggeration (superlatives), as well as the use of jargon or “journalistic” language is not appropriate for your thesis. Simply put: Write in a simple, clear, and easy to understand way.

It is your job to make sure that the reader gets the message of your thesis correctly!

2.2. Formatting

In the following list, you find the formatting requirements for a thesis at our department:

- Paper format: DIN-A4 Paper (white)
- Margins
 - o Left: 4 cm
 - o Right: 2 cm
 - o Top: 2 cm
 - o Bottom: 2 cm
- Font: Times New Roman
- Font size:
 - o Main text: 12 pt
 - o Footnotes: 10 pt
- Line spacing:
 - o Main text: 1.5
 - o Footnotes: 1.0
- Paragraph alignment: Please justify the text on both sides and use automatic hyphenation.
- Headlines are to be bolded, highlighted by larger distances to the text, and should start at the edge of the line.
- Outline
 - o Decadal classification has to be used:
 - 1 ...
 - 1.1 ...
 - 1.2 ...
 - 1.2.1 ...
 - 1.2.2 ...
 - 2 ...
- o The individual entries of the outline have to be assigned the number of the page on which the respective entry starts.

2.3. Citations

If you adopt thoughts from other authors, you need to cite them. Otherwise, you are cheating! You have to cite all resources you used. This includes reprints, unpublished work, web pages etc. You can cite either literally or analogously (by rendering someone else's thoughts using your own words).

2.3.1. Literal citations

Literal citations should be used only

1. If something cannot be formulated better and shorter,
2. If you want to cite a definition made by an author,
3. If you have to analyze and interpret a specific statement of an author.

Thus, literal citations should never be long. Keep them as short as possible! In most cases you don't need literal citations.

Literal citations must be put in quotation marks. You have to add a reference to the source either in the text or in a footnote. If you do not cite the complete sentence, please mark sentence parts or words that you leave out with [...]. It is important that you do not change the meaning of a cited text by leaving out words or parts of a sentence.

2.3.2. Analogous citations

The purpose of analogous citation is to reproduce the thoughts, but not the words, of an author. You need to make clear that you are referring to the thoughts of somebody else. For example, you could write "Merton (1973, p.151) argues that ..." in the text. Alternatively, you can describe the argument of Merton and add a footnote that makes clear that it is the argument of Merton. The footnote has to be preceded with "See".¹

If you refer to an author's thoughts over several pages, you have to express this, for example by writing: "The statements on pages 45-48 briefly outline the model of Merton (1973)." However, you should only use this method in exceptional cases, for example if you want to introduce a particular model.

¹ See Merton (1973), p.151.

2.3.3. Footnotes

Strictly speaking, a footnote at the end of a sentence refers only to this single sentence. It does refer also to the preceding sentence only if that is logically clear. The footnote has no meaning for the following sentence, unless the context is self-evident.

Footnotes must be numbered consecutively. The text of the footnote must be on the same page as the referencing index and separated by a horizontal line from the main text. Each footnote starts with a capital letter and ends with a period.

Footnotes are mainly used to provide references. Only in rare cases it can make sense to mention secondary ideas in a footnote to ensure good readability of the main text. However, you should avoid a detailed discussion of substantive issues in footnotes.

2.3.4. References

For references, the short citation method should be used. The following information needs to be included for each title, regardless of whether this title is mentioned for the first time or repeatedly:

- The last name of the author(s).
- The year of publication in parentheses.
- The page of the citation.
- If several works in the same year by the same author(s) are used, the different sources are marked with “a, b, c ...” behind the year of publication.

2.3.5. Secondary sources

Quotation from a source other than the original is only permitted if the original source is not or only very difficult to obtain. This can, for example, be the case with ancient documents or books. If you need to cite secondary sources, please use the following form:

Schurtz (1898), p. 76, as cited in Gerloff (1952), p. 207.

2.4. Abbreviations

You may use abbreviations that are common in general language, such as “e.g.”, “etc.”, or “p.”. You do not need to include them in the “List of Abbreviations”.

Other abbreviations should be used as little as possible. Think about whether an abbreviation helps the reader to follow your text or not. For example, you might want to use the abbreviation “CAPM” instead of using “Capital Asset Pricing Model” because CAPM is a commonly used abbreviation in finance, but it does not make much sense to use “MOPM” as an abbreviation for Merton’s option pricing model. Before you use an abbreviation, you have to introduce it in the main text. For example, you could say: “The Capital Asset Pricing Model (CAPM) explains expected returns.” In addition, the abbreviations have to be listed in alphabetic order and explained in the “List of Abbreviations”.

2.5. Figures and tables

Figures and tables can be a powerful instrument to support your explanations and make them easier to understand for the reader. Think about whether the figure or table you have in mind serves this purpose. Otherwise, leave it out.

When using figures and tables, you have to take into account that clarity suffers if too much information is included in the figure or table. Moreover, you should not add irrelevant figures or tables trying to fill blank pages or impress the reader.

For the arrangement of figures and tables in the overall work, we recommend the following: Individual figures and / or tables can be included in the main text, as far as their size allows it. Figures and tables that are too large should be put into an appendix. However, the appendix should not serve as a place where you put material that is not needed. You should not circumvent the decision as to whether a table or figure belongs to your thesis by putting it in the appendix.

All figures and tables used need to be numbered consecutively, e.g. Figure 1, Figure 2, Table 1, and provided with a title that indicates the content of the respective figure or table. The number and title are placed directly above the figure or table. If a figure or table from another author is used, a reference needs to be given in a footnote. If you put figures and tables in an appendix, number them consecutively starting with a prefix A in front of the number, e.g. Figure A1, Figure A2, etc.

If figures and tables are used within the thesis, a “List of figures” and a “List of tables”, which contain the numbers and headings of the figures and tables, respectively, need to be included directly after the “Table of contents”.

2.6. List of references

The list of references contains a complete list of all referenced sources, i.e. for all your citations in the text or footnotes there must be an entry in the list of references (and vice versa). The list of references should be included at the end of your thesis, under the heading “References”.

The list of references has to be sorted alphabetically by the first authors’ last names. Regarding the formatting of the entries, you will recognize that there exist several different styles in the literature, e.g. depending on the journal that a paper has been published in. Accordingly, we do not require you to use a specific formatting style, but to be consistent throughout your thesis. When you select one specific style, stick with it.

Irrespective of the particular formatting style, it is important to give all relevant information to be able to clearly identify the referenced source. Typically, each entry consists of four parts: (full) name of the authors, the year of publication (in parentheses), the title, and further publication information such as the title, volume, and pages of the journal or book. You can use the style guidelines and examples of The Chicago Manual of Style for author-date references (<https://www.chicagomanualofstyle.org/book/ed17/part3/ch15/toc.html>) as orientation for your list of references.

2.7. Declaration

With each thesis, you have to give a declaration that you have prepared the thesis on your own. The exact wording of the declaration can be found in the examination regulations of your program of study. Please note that the wording differs between seminar thesis (term paper) and bachelor’s or master’s thesis. A form for the declaration is also provided on the website of the examination office.

2.8. Formal structure

Your thesis should be organized in the following way:

1. Blank page*
2. Title page**
3. Table of contents
4. (Possibly) List of tables
5. (Possibly) List of figures
6. (Possibly) List of abbreviations

7. Main part
8. (Possibly) Appendix
9. References
10. Blank page*

* Please note that the positions 1. and 10. do not apply to seminar theses and do not apply in the electronic (PDF) versions of bachelor's or master's thesis.

** Examples for the layout of the title page can be found below (see Appendix). Every marginal change in the paper's title must be negotiated with the supervisor.

For the numbering of the individual sheets, the following is required:

- | | |
|---|--|
| 1. Blank cover sheets: | No numbering |
| 2. Title page: | No numbering (but page counts) |
| 3. Table of Contents and other tables: | Continuous roman numbering (starting with II, because title page already counts) |
| 4. Text, possibly appendix, and Bibliography: | Continuous arabic numbering (starting with 1) |

2.9. Submission

Information on submission requirements of seminar theses is given in the respective seminar documents.

Information on submission requirements of bachelor's and master's theses are given on the website of the examination office: <https://www.wiso.uni-koeln.de/en/faculty/managing-board/examination-office/2015-examination-regulations/theses/>

For empirical work, the data used must also be submitted. The same applies to self-generated computer programs and codes.

2.10. Amount of pages

Information on the number of pages of a seminar thesis is given in the respective seminar documents.

The amount of pages of a bachelor's or master's thesis should be ... $\pm 10\%$:

- Bachelor Business Administration: around 30 pages

- Master Business Administration Finance: around 50 pages
- Master International Management: around 40 pages

3. Grading

Based on the requirements detailed in Section 1 and 2, we will evaluate the quality of your thesis and grade your work accordingly. We will also check the literature, data and program codes. Students can help to accelerate the grading process by providing the cited literature.

4. Plagiarism

Unfortunately, it sometimes happens that people cheat when writing a scientific paper. Even students are not always free from such temptations. Due to the nature of seminar, bachelor's, and master's theses, student fraud is primarily about copying some or all of the work from unnamed sources. To make it very clear again: Such plagiarism is a fraud and must be punished to protect all honest students. As part of the grading of a thesis, we therefore check whether a thesis in whole or in part represents a plagiarism. Fortunately, in the age of the Internet, this can be done quite easily.

5. Appendix

5.1. Title page seminar thesis (example for DIN A4 page):

<p style="text-align: center;"><<Title of the Seminar Thesis>></p> <p style="text-align: center;">Seminar in <<Course name >></p> <p style="text-align: center;"><<in Winter 2019/2020>></p> <p style="text-align: center;">Submitted to</p> <p style="text-align: center;"><<Examiner name>></p> <p style="text-align: center;">Department of Business Administration and Finance</p> <p style="text-align: center;">University of Cologne</p> <p><<Student name>></p> <p><<Student address>></p> <p><<Student address>></p> <p><<student@smail.uni-koeln.de>></p> <p><<Student ID: 123454567>></p>

5.2. Title page bachelor's and master's thesis (example for DIN A4 page):

<<The Full Title of the Thesis at the Top>>

<<Student name>>

<<Bachelor's>>Thesis at the Department of Finance

Examiner:

Univ.-Prof. Dr. A. Kempf

Submitted in the <<Bachelor>> program

<<Business Administration>>

at the Faculty of Management, Economics and Social Sciences
of the University of Cologne

<<Cologne, Date of Submission>>

<<Student name>>

<<Student address>>

<<Student address>>

<<student@smail.uni-koeln.de>>

<<Student ID: 123454567>>