



Guidelines for academic writing

April 2020

1. Prerequisites

The general prerequisites for academic writing at the Chair of Supply Chain Management are as follows:

a. Bachelor Thesis:

The prerequisites writing a bachelor thesis at the Chair of Supply Chain Management are the successful completion of at least 2 modules from the advanced studies of the area of Information & Operations Management. At least 1 of these modules must have been completed at the Chair of Supply Chain Management.

b. Master Thesis:

In order to enable a supervision of a master's thesis at the chair of Supply Chain Management, 3 modules are preconditioned to be passed in the track of Information & Operations Management and at least 1 module must be completed at the Chair of Supply Chain Management.

2. Process

The paper can be written in English or German, according to the arrangement with the supervisor. Papers in English (German) must comprehend a one-sided German (English) summary.

a. Term Papers:

Details of the process of conducting term papers are announced in the according seminars.

b. Bachelor and Master Thesis:

It is necessary to apply for the supervision of a thesis at the examination board. At <https://www.wiwi.europa-uni.de/en/studium/pruefungen/abschlussarbeit/index.html> you find details for the application.

All students accepted at the Chair of Supply Chain Management will attend a short introductory course at the start of the semester. During this course, the processes and regulations for conducting a thesis as well as the possible topics will be presented. The attendance of the course is mandatory. After the course, you may state your preferences for certain topics. The assignment of topics will be announced by the members of the chair during the following days.

If you wish to suggest your own topic (e.g., a company project), you should contact early (before the application for supervision at the examination board) Prof. Almeder and provide an exposé which should include the following points:

- State why your suggested topic is scientifically interesting.
- List the essential current research literature which should be the starting point for your work.
- Structure your methodological approach such that the red line of arguments is visible.
- If you want to investigate a (real-world) case study:
 - Describe the methods you want to use and give arguments for your selection.
 - Develop a structured time schedule for the implementation of the applied part of your work.

After the assignment of topics you should develop on concept containing a preliminary structure, derivation of the research question(s), a description of the methodology, and a survey of the most important research literature for that topic. Every student has to present her/his concept. After the successful presentation and in accordance with your supervisor the thesis will be registered at the examination office.

After a few weeks there will be another presentation of the current standing of your work.

Please pay attention to the time limits for the submission of the thesis given by the examination regulations. An extension of the deadline must be applied at the examination board and your supervisor has to agree with the extension.

The general time schedule for the process is as follows:

	Winter term	Summer term
Application of supervision	Deadlines of the examination board	
Assignment of topics	mid of October	mid of April
Presentation of concept	mid of November	mid of May
Presentation of current standing	December/January	June/July
Submission Bachelor	January/February	July/August

3. Requirements regarding the content

With a bachelor/master thesis the student should show that she/he is able to work on a chosen topic scientifically on herself/himself. This includes the recognition and presentation of the problem and solution approaches. Prior to that, the clear formulation of the research topic/question is necessary. Working on the thesis comprises several steps:

- (i) Search, categorize and analyze the relevant literature. During/after this step it might be necessary to adapt the research topic/question according to the findings of the literature research
- (ii) Develop own ideas and approaches to tackle the research question. Find the golden thread through your thesis and develop the structure of your thesis as a starting point which makes the central theme and line of arguments clear to the reader
- (iii) If the thesis contains a practical part (developing code, computer simulations, interviews...), start with those parts. If the central theme of the thesis is an overview of existing literature, start developing categories and identify possible gaps.
- (iv) Start writing the main parts (problem description, solution approaches, results). Leave the introduction and the conclusions for the very end. Use your own formulations and do not copy from literature. It is not necessary to start from square one in your thesis describing trivial things in production and logistics. Write the thesis as you would write for one of your student colleagues.

4. Amount of work

Term papers shall embrace at least 10 editorial pages and 20 editorial pages at a maximum;

Bachelor's Theses shall embrace from 25 to 40 editorial pages;

Master's Theses shall embrace from 60 to 80 editorial pages.

Note that a good work may be brief and concise and the length of the work is not automatically associated with a positive mark.

Formally, a thesis can be broken down into several parts, which shall follow a specific sequence: Title page, table of contents, text, appendices¹, bibliography (see point 11).

Usually, the prefix (title page plus table of contents) is serially Roman numbered. Note, that on the title page no page number is indicated. The rest of the paper is consecutively Arabic numbered.

¹ If there are several appendices, they are consecutively denoted by capitals (Appendix A, Appendix B).

All thesis and term papers must be handed in electronically. Printed versions of term papers should be tacked; thesis should be spiral-bounded or regularly bounded. (For term papers – depending on the lecturer – the submission printed version might be omitted.)

5. Literature

The references provided by the supervisor always represent none but an introductory literature to the topic. Solely dealing with these references is not sufficient to achieve a positive grade. There is rather the need of further exploiting relevant literature. Often, the provided references offer suggestions on additional published literature related to the topic.

For the purpose of literature research it is inevitable to attend libraries and literature databases. Some information is available at the homepage of the university library too.

Basically, solely the actual used and relevant literature shall be cited. An extensive literature survey is to be given only if expressly requested.

It constitutes an imperative of academic writing to indicate explicitly the origin of all facts and not self-developed thoughts as well as other suggestions not forming academic common knowledge. Transcription and copying without correct citation or without marking the quotations as such is a plagiarism and always leads to negative grading, and (in serious cases) the examination board possibly declares the exemption from the study. More information on plagiarism and its consequences can be found on the websites of the examination board:

<https://www.wiwi.europa-uni.de/en/studium/pruefungsausschuss/richtlinie-taeuschung/index.html>

If possible, by means of a justifiable effort, all documents and information used and quoted in the paper (e.g. articles, chapters of books or relevant pages of a book, long result tables, program code, and internet sources) have to be stored on a CD/USB-stick and submitted with the paper. In addition, all documents should also be stored in the literature database of the chair.

6. Formal requirements

In scientific papers it is common to use one-half spacing and the font size is usually set to 12 pt. In order to enhance the readability, justification should be used. Use the A4 format and print each page on both sides, accounting for an inner margin of about 4 cm and an outer margin of about 2 cm.

7. Title page

The title page shall provide the following information in a clear form. First, the description and term of the course (in case of a term paper) as well as the kind of work is indicated, following

the title of the paper, name, matriculation number, email and the deadline. Finally, the chair and the supervising lecturer are named.

8. Table of contents

By listing the headlines of the respective chapters, the table of contents shows the way the student has comprehended and dealt with the topic. It should be structured logically and should signal an on-topic common theme (Structure of the work). The table of contents must be comprehensible and balanced.

A coherent and self-contained line of thoughts requires a structure including ancillary points and sub items in a clear form, i.e. points at the same level must be accorded the same importance with regards to content and logic and must come from a superior issue.

It is recommended to number the sections using the decimal system. Main chapters are closed with a decimal point (e.g. 1. Introduction); whereas subsections not (e.g. 2.1). A chapter or section never contains only a single subsection (i.e., is there is a subsection 2.1 then there must be at least a subsection 2.2), otherwise the separation in a subsection would not be necessary.

9. Introduction and conclusion

The paper begins with an introduction, by which the problem formulation, aim of the research work, definitions and methodological structure (course of investigation) are expressed. In general, an introduction takes 1-3 pages. The last paragraph should contain a short summary of each chapter of the work. (One sentence per chapter.)

Usually, the end of the work is constituted by a final section with a headline indicating whether the author intends at summarizing the major results, giving a brief outline of the thesis or providing a preview on unresolved problems. The conclusion part takes usually 1-2 pages.

10. Abbreviations

In German-speaking countries, abbreviations are impolite in the field of business administration, especially in mid-sentence. They should therefore be used as sparse as possible. Few exceptions like „etc.“, „e.g.“ or abbreviations for currencies and mass are commonly accepted. Moreover, short forms of institutions (EU, EDV) and of laws are widely used.

Common technical abbreviations (e.g. ISO, RFID, FIFO, ...) as well as readability improving short forms of, e.g., long, repetitive terms should be used after declaration when initially used. However, the usage must be uniform throughout the paper (e.g., either always “Radio Frequency Identification or always RFID). A list of all abbreviations used (except those commonly used) should to be added after the table of contents.

11. Word-by-word quotations and citations

Word by word quotations start and end with quotes. As the name says the quotation must be word by word. Deviations shall only occur in few exceptional cases, whereas the following rules must be kept. Omissions of phrases are denoted by three continuous dots (...). Further added phrases to the quoted text like exclamation marks or sentence completing verbs are inserted to the citation with squared brackets.

Citations in foreign languages are translated in the continuous text, whereas the original is quoted in the footer. In general, a citation shall not embrace two or three sentences. If there is nevertheless the need of longer quotations, they are written intended and one-half spaced. However, mostly it is reasonable to describe long citations by own words, quote a reference and add an addendum like "cf." right before author and work.

Every citation (word-by-word or own words) must be marked with the according reference.

Citation is done towards the original text. If the original source is not accessible, citation is exceptionally made towards secondary literature. In that case, first the original source is indicated, following "quoted in" and the actual source.

12. Formulas

Mathematical formulas are displayed intended and centered. In order to facilitate cross references, they are consecutively numbered (e.g., "(1)"), usually at the right hand side.

13. Footnotes

Footnotes are normally meant to include only short explanations, cross-references etc., not long texts. They are delimited from the text by a horizontal line, written single-spaced, in font size 10 pt. and they are separated from each other by one-half spacing.

14. Bibliography

All cited sources and only these are listed under the point Bibliography. The citations are quoted in alphabetical order according to the name of the (first) author. Publications from the same author are listed in the order of the publication date.

The citations should follow a form commonly used in academic literature. The indications listed below are obligatory and may be used in the following form:

a. Monographies (independent works)

Name of the author and the names of the authors respectively, first initial, publication title, edition number (exceptionally first editions), publisher, place of publication, date of publication.

Example:

Jacobs, F.R. and Chase, R.B., *Operations and Supply Management: The Core*, McGraw-Hill/Irwin, New York, 2008.

b. Articles in compilations and handbooks

Name(s) of the author(s), first initial, title of the article, “in:”, editors’ names, first initial, “(Ed. or Eds.)”, compilation title, publisher, place(s) of publication, first page – last page in the compilation, date of publication.

Example:

Almeder, C., Preusser, M., and Hartl, R.F., Simulation and optimization of supply chains: alternative or complementary approaches?, in: Günther, H. and Meyr, H. (Eds.), *Supply Chain Planning -- Quantitative Decision Support and Advanced Planning Solutions*, Springer, Berlin, 29-53, 2009.

c. Periodicals

Name(s) of the author(s), first initial, title of the article, journal title, volume (issue number), first page – last page, date of publication.

Examples:

Almeder, C., A hybrid optimization approach for multi-level capacitated lot-sizing problems, *European Journal of Operational Research* **200**, 599-606, 2010.

Pitakaso, R., Almeder, C., Doerner, K., and Hartl, R.F., Combining population-based and exact methods for multi-level capacitated lot-sizing problems, *International Journal of Production Research* **44** (22), 4755-4771, 2006.

d. Anthologies

Name(s) of the publisher(s), first initial, (Ed. or Eds.), publication title, publisher, place of publication, date of publication.

Example:

Günther, H. and Meyr, H. (Eds.), *Supply Chain Planning -- Quantitative Decision Support and Advanced Planning Solutions*, Springer, Berlin, 2009.

e. Internet

In addition, internet resources can and should be cited when used. In view of constant changes of the contents, the date of the request should be indicated.

Example:

ACO Homepage: <http://iridia.ulb.ac.be/~mdorigo/ACO/ACO.html> (24.07.2003)

Internet resources do not form – among other aspects because of constantly changing contents – literature sources in the strict sense and therefore solely serve as supplements. Each paper must contain citations of books and articles. Online sources like “Wikipedia”, online course material or anything similar are not citable. The only exception regards quotations of copied graphics, contents of company homepages (only if directly related to the work), and published information of public institutions.

15. Citation in the running text

In the continuous text, the cited sources are quoted by names (publication year), whereby up to two authors’ names are listed. If there are more authors, only the first author with the addition “et al.” is indicated.

Examples:

As described in Almeder (2010)

In Preusser et al. (2009) new solution methods ...

... (see Jacobs and Chase, 2008; Pitakaso et al., 2006).

16. Tables and graphics

All tables and graphics illustrating the paper are separately consecutively numbered. Their title shall express an accurate description of the contents. Obviously, the columns and rows and the axis of coordinate systems as well as their curves must be labeled. Citations of tables and graphics are made right after the title and the word “Source”.

Tables and graphics should supplement the continuous text in a brief and structured form. If the author thinks that an extensive material is indispensable, or if the tables and graphics are very large scaled relative to the importance to the work, it is recommended to add these illustrations as appendices. Likewise, comprehensive documentations as questionnaires and computer program extracts are to be included in form of appendices.