Guidelines for the preparation of Bachelor's and Master's theses

These guidelines are intended to help students writing their theses at our department. The guidelines cannot and should not replace the relevant literature on the design of academic papers, but only supplement it. It is also intended to help ensure that questions relating primarily to content can be discussed during consultation hours with academic staff. The regulations of the WiSo Examination Office for the preparation of theses always take precedence.

1. Requirements for the preparation of a thesis

The admission requirements for writing a thesis are set out in the respective - currently valid - examination regulations for your subject.

For students of the examination regulations 2015 (PO2015) and 2021 (PO2021), the <u>Examination</u> <u>Office has summarized all valid regulations for a thesis in your degree program on a website</u>. Please check your admission requirements before contacting us!

2. Assignment of topics

You can write your thesis at our chair in one of the following economic subject areas:

- Game Theory
- Experimental Economics
- Market Design and Auctions
- Microeconomics and Industrial Organization
- Behavioral Economics
- Bounded Rationality

Our department has a list of suggested topics for Bachelor theses, which is updated regularly. You can find this list on our <u>website</u>. Alternatively, you can of course also submit your own proposal. Master's students are expected to submit their own topic proposal, which should be explained in a detailed synopsis. If you are interested in one of the above-mentioned topics, please send an e-mail to <u>ockenfels-abschlussarbeiten@uni-koeln.de</u>.

Experience has shown that it makes sense to first create a brief basic concept that presents the research interest, specifies the central questions of the topic and introduces the scientific methodology. It can also be helpful to prepare an initial outline in advance, which shows the weighting of the sub-topics, and to create an initial overview of the topic-related literature.

3. Processing time

The processing time for **Bachelor theses** is 12 weeks. There are no exceptions to this rule.

The processing time for **Master theses** is 6 months. There are no exceptions to this rule.

4. Notes on form and content design

The quality of an academic paper depends not only on the content presented, but also on its structure, language and spelling.

4.1 Language

You can choose to write your thesis in German or English.

4.2 Scope

According to the examination regulations, a thesis should usually have a maximum length of 40 pages for **Bachelor's theses** and a maximum of 60 pages for **Master's theses**.

4.3 Formatierung

The following formatting rules apply to theses supervised by our chair:

Paper format::	DIN A4
Margins:	left: 3,5 cm
	right: 2,5 cm
	top: 2,5 cm
	bottom: 2,5 cm
Line spacing::	onehalfspacing
Font:	e.g. Times New Roman or Arial
Font size:	12 for standard text blocks in the paragraph
Paragraph:	Optionally left-aligned or justified; if you use justified text, please activate hyphenation
Headings:	Are to be emphasized in the text according to their importance by their size

4.4 Arrangement of the pages

- 1. Title page
- 2. Table of contents
- 3. List of tables and figures, if applicable
- 4. List of abbreviations, if applicable
- 5. Main text
- 6. Bibliography (in alphabetical order of authors)
- 7. List of aids used, if applicable
- 8. Appendix, if applicable

4.4.1 Title page

The title page of the thesis should correspond to the sample provided by the examination office. Please note that the samples for **Master's and Bachelor's theses** are different.

4.4.2 Contents table of contents / structure

The table of contents should give the reader an overview of the structure of the topic. All bullet points should be included within the main text.

A numerical order or an alphanumerical order are possible, whereby a numerical structure according to the gradation principle is common. It should be noted that there must be a period after each number, but the final point is omitted. Subdivisions may never stand alone, they must each comprise at least two units; where no subdivision is necessary (or possible), there is no need for a separate subdivision. This means that there must also be a section 1.2 for a section 1.1.1 and a section 1.1.2 for a section 1.1.1.

As a rule, there should be no heading without subsequent text in order to avoid a large number of headings being strung together. A short text can, for example, clarify the structure of the following sections.

It is usually advisable to precede the actual main section with an introduction whose task is to motivate the topic, explain the specific research question and outline the methodological approach. The purpose of the concluding section is to summarize the considerations made and to come to a final conclusion.

If a subdivision does not appear in the text, it must be clear from the structure. Even if the author has a certain amount of leeway in the structure, the following should be noted:

Although the outline is only an external aid for those working on and reading the paper, the author also uses it to show the extent to which an exercise has been mentally systematized.

In the outline, the author also indicates the line of thought and the weight given to individual problems.

The structure must be logical, proceeding from the general to the specific. The individual parts must be in an appropriate relationship to each other. Too many subsections often indicate incorrect or clumsily chosen main points.

Do not structure your text too deeply; try to use blocks of text of approximately equal length that are not further subdivided. A rule of thumb for the right depth of structure is: Text blocks of less than one page are too short; text blocks of more than five pages are too long.

4.4.3 Lists of tables and figures

Tables and figures must always be labeled so that their content can be identified (factual, spatial and temporal delimitation, dimension if applicable). For geographical representations, coordinates, curves, points, etc. must be labeled precisely. Tables or graphical representations should be numbered consecutively throughout the text. If there are a large number of tables and graphical representations, it is advisable to summarize them in an appendix. If the author refers to a table or figure in the paper, its number should be listed. In the case of tables and graphical representations, the source should be indicated below the table or graphical representation if possible. If a separate table is compiled from several tables by other authors, all the documents used must be listed. The list of figures and tables should precede the text.

4.4.4 List of abbreviations

In the list of abbreviations, common abbreviations such as "e.g." should not be used.

4.4.5 Main text

The use of inappropriate expressions and non-binding formulations as well as undifferentiated value judgments ("should", "must", "just") should be avoided. Own value judgments must be clearly separated from factual statements. Formulations from the first-person perspective should be avoided.

4.4.6 Citation method

The definition of the citation style is intended to standardize the main formalities and is based on the **Harvard citation style**. It is therefore advisable not to use footnotes, but to indicate the author, year of publication and page number in brackets in the text, for example (Müller 2004, p. 37).

Direct quotations must be marked with quotation marks and must include a page reference. The source reference then follows the quotation according to the following pattern: "Direct quotation" (Waringer and Schulz 2003, p. 10).

In the case of several works by one author in one year, these are distinguished by small letters: (Müller 2002a, p. 37) and (Müller 2002b, p. 68).

If there is more than one author, separate them with commas: (Meyer, Schulz and Mosblech 2003, p. 10)

If there are several sources, these should be separated by semicolons: (Waringer and Schulz 2003, p. 23; Theisen 2003, p. 137).

If authors are mentioned within a sentence, only the year of publication is given in brackets. Example: "The results of Waringer and Schulz (2003), show that..."

Quotations in foreign languages should not be included in the main text if possible, but should be reproduced analogously with reference to the relevant passage (this does not apply to Englishlanguage publications). An own translation must be marked as such at the end of the relevant text passages. In the case of published German translations, the relevant passage can be included verbatim in the text under quotation marks.

If symbols from other sources are quoted (e.g. for formulas), these must be adapted to those used in the work or the deviations explained.

For the time being, the following applies to the citation of sources from the Internet that have not been published elsewhere: The author's name, year of publication and time of download should be stated. The URL should also be given in the list of sources.

A printout of the Internet source should be available on request.

4.4.7 List of sources and literature

The bibliography gives an account of the use of other people's ideas and shows which specialist literature the author has consulted. It may also show readers previously unknown titles. The bibliographical information must be complete for procurement and control purposes.

It is not advisable to attempt to create a favorable impression by making the bibliography as extensive as possible. Each title included requires the work to make a corresponding claim.

The bibliography at the end of the papers therefore only lists the sources referred to in the text - in alphabetical order by author.

The following information are required:

- Surname and first name of the authors (if no author is known: "N. U."; academic degrees and titles are not mentioned),
- Year of publication,
- Title of the work or essay (in the case of articles in journals or collected editions additionally 'in:' Title of the journal / collected edition in the case of collected editions, the name of the editors must also be given before the title with the addition "(ed.)"),
- Volume (and edition, if applicable),
- Indication of the pages of the article in the journal or collective work,
- Publisher: Place of publication (for books, not for magazines),
- Internet: Name, date, URL, time of download or page visit.

Examples:

Bolton, Gary E. und Axel Ockenfels (2000). ERC: A theory of equity, reciprocity, and competition, in: American Economic Review, 90(1), S. 166-193.

Siebert, Horst (Hrsg.) (2004): Quantitative Ansätze zur Modellierung des Energiesektors, J.C.B. Mohr Verlag: Tübingen.

Maus, Roger (2003): Modellrechnungen zur Wirtschaftlichkeit der Verdichtung und Erweiterung von Fernwärmenetzen, in: Eickhoff, Norbert (Hrsg.): Energieversorgung - Analysen, Konzepte und Probleme, Bayrische Verlagsanstalt Bamberg 2003, S. 91- 112.

In the case of two or more authors, the following scheme is to be applied with regard to the order of the author names: Surname(A), First name(B) Surname(B) and First name(C) Surname(C)

The format and arrangement of all other details remain as before and as listed above.

Erdmann, Georg und Peter Zweifel (2007): Energieökonomie. Theorie und Anwendungen, Springer: Berlin.

Mans, Muster (2010): www.musterseite.de/texte/test.pdf, 19.03.2010.

References in the bibliography are sentences that must be followed by a period at the end of the sentence.

Some examples of common abbreviations for source references:

no. = Number n. d. = without year n. u. = without author's name pp. = Pages Vol. = Volume

4.5 Declaration in lieu of an oath

In addition to the thesis, you must also submit a <u>declaration in lieu of an oath</u>. Please use the form provided for this purpose on the homepage of the Examination Office.

5. General remarks

When working on the assignment of a thesis, the highest principle applies:

<u>The comprehensibility of all statements must be ensured, only then is it a scientific work in the strict sense!</u>

It must also be clear at every point in the paper whether the author is reproducing their own work results, their own opinion or that of another author. The reproduction of another author's presentation can be verbatim (in quotation marks) or by using the subjunctive mood.

If the work refers to sources that are not generally accessible, these must be made available for inspection on request.

Every scientific paper must have a summary in the sense of a result. If possible, partial results of the investigation should be emphasized by summaries in individual chapter sections. At the end, it should always be clearly emphasized as an overall result (concluding remarks).

6. Tips for literature research

There are a variety of options for searching for literature: The University and City Library of Cologne, Web of Science (only from the university network or using the VPN client), Google Scholar, etc.

To access articles from specialist journals: http://ezb.ur.de/ezeit/search. This is only possible from the network of the University of Cologne or outside the campus area via a VPN connection (https://rrzk.uni-koeln.de/internetzugang-web/netzzugang/vpn).

7. Principles of valuation

The following criteria are generally used for evaluation:

A. Topic of the thesis

- Objective difficulty of the topic
- Required workload
- Significance and formulation of the problem dealt with
- Independence of processing

B. Content of the thesis

- Conception of the research approach
- Systematic problem solving
- Weighting of the work steps

• Result of the work

C. Formal design

- Structure and organization
- scientific expression
- Accuracy of illustrations and directories
- Citation, orthography

8. Recommended reading on the topic of "Scientific work"

Cole, A. and Karl W. Bigelow (2006): A Manual of Thesis-Writing: For Graduates and Undergraduates, 1st edition, Cosmo Study Guide.

Clark, Irene L. (2006): Writing the Successful Thesis and Dissertation: Entering the Conversation, 1st edition, Pretince Hall International.

Zerubavel, Eviatar (1999): The Clockwork Muse: A Practical Guide to Writing Theses, Dissertations, and Books, Harvard University Press.