



Institute for Strategy, Technology and Organization

Formal Requirements for Term Papers and Final Theses

As of October 2012

1 Objective

These guidelines describe the formal principles that must be observed when writing seminar- and final theses at the Institute for Strategy, Technology and Organization (ISTO). Adhering to these principles ensures comparability between different papers. Furthermore, as the author of an appropriately formatted paper you demonstrate your ability to properly utilize certain formal standards.

Writing scientific papers is among the basic skills that should be acquired during academic studies, yet it is not limited to the formal specifications addressed here. In the references at the end of this document, you can find some suggestions for more detailed discussions on standards of scientific writing.

2 Structure

A scientific paper contains the following elements:

- Front page
- Preface (if applicable)
- Table of contents
- List of figures (in case of three figures or more) (if applicable)
- List of tables (in case of three tables or more) (if applicable)
- List of abbreviations
- List of symbols (in papers with formal models) (if applicable)
- Text (introduction, main part, conclusion)
- Bibliography
- Appendix (if applicable)
- Declaration of authenticity (in case of final theses)

The structure of a paper should allow the reader to quickly gain an overview of its contents. It is thus important that the selected headings reflect the content in a concise way. The central theme should be clearly visible from the structure as presented in the table of contents.

Headings are consecutively numbered using Arabic numerals. Subsections are numbered using the section number followed by the subsection number, separated by dots with no dot after the last numeral. Examples for correct numerations are "4.2.1" or "3.4" etc.

New levels must consist of at least two subsections (thus, 2.1 implies that there is also 2.2).

3 Formal Specifications

The term paper or thesis has to be printed one-sided on white paper in DIN A4 format.

The length of a term paper depends on the number of ECTS points that can be earned in the corresponding seminar. It is measured on the basis of the number of characters in the main part of the paper including space characters. In general, the length of a paper is 22,200 characters (approx. 10 pages without figures and tables) for a seminar with 3 ECTS, 44,400 characters (approx. 20 pages) for a seminar with 6 ECTS, 70,000 characters (approx. 27 pages) for a Bachelor thesis and 150,000-160,000 characters (approx. 56-60 pages) for a Master thesis. This, however, only applies to seminars in which the term paper is the only course assignment. If the course assignment consists of several parts, the length of the term paper is reduced accordingly. The announcement of the supervisor is therefore decisive. In individual cases, a shorter or more comprehensive presentation might be reasonable and can be agreed upon with the supervisor.

The following measures should be used for the margins:

- Top: 2.0 cm
- Bottom: 2.0 cm
- Left: 4.0 cm
- Right: 2.0 cm
- Header: approx. 1.2 cm
- Footer: approx. 1.2 cm

The standard font for the text body is "Times New Roman" in font size 12 pt with standard character spacing. Line spacing is 1.5 lines. For better legibility, full justification and automatic hyphenation is recommended.

The pages of the term paper or thesis are consecutively numbered. Thereby, Roman numerals are used until the beginning of the text body. The pages containing the body of the text, the bibliography, and the appendix are marked with Arabic numerals. The front page does not carry a page number; numeration thus starts on the first page of the table of contents with a Roman I.

Place page numbers in the lower right corner of a page.

4 General Remarks

Spelling and grammatical rules must be strictly observed. Nonconformities lead to point deductions.

In order to meet scientific standards, it is essential to define and explain **central concepts and ideas** that are used in the term paper or thesis. This also facilitates a later discussion of complex issues.

Integrated **diagrams** must be explained in the text and labeled.

When using **mathematical formulas**, attention should be paid to the traceability and consistent definition of all variables. If variables from different sources are used, a standardization of the notation is strongly recommended.

We recommend the (freeware) typesetting system *LaTeX* for word processing for term papers or theses that contain many mathematical formulas. When using other **word processing programs** like *Microsoft Word*, templates, automatic indexing as well as the functions for figure captioning, footnotes and cross references help in creating a clearly arranged and appealing structure.

The **table of contents** (that does not include itself) gives the numbering and the exact wording of the respective section's heading and is left-justified. Subsections are indented according to their level. The page numbers that mark the beginning of a section are included and are right-justified.

The **list of abbreviations** contains all abbreviations that are used in the term paper or thesis except for those in common use like "e.g.", "etc.", "i.e.", that can be found in a standard dictionary. All abbreviated terms must be written out when they are first used in the text.

5 Citing

5.1 Quotations

In a scientific paper it is inevitable that one cites other authors for the purpose of analyzing or supporting own statements. In doing so, it is important that the utilized sources come from approved publications or are at least discussed in a critical context by the author. Lecture notes and term papers are not citable.

Each idea adopted from someone else, irrespective of whether it is reflected literally or logically, must be cited and the original source given. A violation of this principle constitutes plagiarism and is a breach of scientific ethics. Proper quotation is among the basic skills required for writing a scientific paper. Incomplete or improper citation will thus result in failure of the examination.

Two types of quotation can be distinguished:

1. *Direct quotations* are quotations that reflect an author's formulations without alteration. They are particularly suitable if the original source offers definitions, very concise phrases or concepts important for a certain branch of science and should thus be used sparingly.
2. In case of *indirect quotations*, a statement from the original source is paraphrased in the author's own words and is integrated into the text while specifying the original source.

The source of a quotation must be specified in such a way that the reader can easily find the respective passage. Thus, exact page numbers are necessary in almost all cases. If the only gist of a scientific paper is cited, for example in case of an empirical study, the page number can be omitted.

Citations in term papers or theses written at the ISTO follow the author-year format ("Harvard notation") which can be frequently found in international scientific papers in the area of economics and management. The original source of a quotation is specified by the surname of the author(s) and the year of publication. Moreover, the bibliography is organized in such a way that the information contained in it is sufficient to quickly identify the corresponding source. The following section provides some examples for the correct use of the author-year format.

5.2 Citing Examples

Direct quotations are put in quotation marks. The source is cited in brackets immediately after the quotation.

"Modern psychology tells us that as humans we are only moderately good at deductive logic, and we make only moderate use of it" (Arthur 1994, p. 406).

English text passages are cited in their original form. Quotations in other languages are cited in the text in translated form and are included in the appendix in their original language.

In case of two authors, their surnames are separated with an "and", the naming of the first author with the supplement "at al." is sufficient from three authors upwards.

The author-year format allows the specification of a source in the running text so that the authors are becoming a part of the sentence.

The expectancy-valence framework first discussed by Chen and Miller (1994) was subsequently developed and used in a number of studies (Smith et al. 2001, p. 320).

If several papers from one author are cited from the same year, they are set apart from each other by adding lower case Latin letters to the year. This notation is continued in the bibliography.

If multiple sources that refer to a certain issue have to be cited, they are separated by means of semicolons.

Assuming independence, this view can certainly be supported (Armstrong 2000a, p. 267; Armstrong 2000b, p. 2; Genakos and Valletti 2003).

Texts of a law are included in the running text together with their respective paragraph/article and their commencement date. Wordings of the law do not have to be listed in the bibliography. The abbreviations of the acts (e.g. TA), however, must be included in the list of abbreviations.

The network operators are bound to provide the services reliably (Section 1(2)(1)(c), TA, 1996).

6 Bibliography

The bibliography contains all sources the term paper or thesis refers to, ordered by the surnames of their (first) authors. If several papers by one author are cited, they are sorted by publication year and then by the number of co-authors.

Authors are listed in the same order as they appear in the source and are separated by diagonal slashes.

Each item in the bibliography ends with a period. The same applies to footnotes.

For **monographs**, in addition to the author, the year of publication and the title, the bibliography also gives the edition (if stated), the publisher and the place of publication (in case of multiple places: "first place et al.").

Crandall, Robert W. / Waverman, Leonard (2000): *Who Pays for Universal Service? When Telephone Subsidies Become Transparent*, Brookings Institution Press, Washington DC.

Publications in **collected editions**, besides naming the corresponding article, this also requires the bibliographic details of the superordinate publication including the page reference. The editors of the collected edition are followed by the expression "Eds.".

Cave, Martin (1996): "Meeting Universal Service Obligations in Competitive Telecommunications Markets: Lessons for the Postal Sector", in: Stumpf, Ulrich / Elsenbast, Wolfgang (Eds.): *Cost of Universal Service*, Bad Honnef, pp. 95-114.

For contributions in **journals**, in addition to the journal title and the page numbers the volume and the issue number must be stated.

Hoernig, Steffen H. (2006): "Should Uniform Pricing Constraints Be Imposed on Entrants?", in: *Journal of Regulatory Economics*, 30(2), pp. 199-216.

For **working papers**, the institution at which the paper was written and – if available – the date of the cited version has to be noted.

Kretschmer, T. (2005): "Competing Technologies in the Database Management Systems Market", Networks, Electronic Commerce, and Telecommunications (NET) Institute, Working Paper #05-17, October 2005.

The citation of **websites** is possible if the URL and the access date are documented. However, attention must be paid to the quality and informative value of the website – for example Wikipedia is not quotable! If the author of the source is not identifiable, the responsible institution is listed. Abbreviations for institutions of course have to be included in the list of abbreviations. If the year specification is missing, the expression "n.d." is used.

Bundesministerium für Wirtschaft und Technologie (BMWi) (o.J.): "Politik für Energie", <http://www.bmwi.de/BMWi/Navigation/Energie/energiepolitik,did=295096.html>, Zugriff am 05.01.2011.

For articles in **newspapers**, in addition to the newspaper title and the page reference, the number and issue date have to be stated.

Ehrlicher, Werner (1962): "Der Fiskus und die Geldentwertung", in: *Frankfurter Allgemeine Zeitung*, #203 vom 1962-09-01, S. 8.

7 Submission

The form of submission for term papers is announced in the individual seminars. If the paper is to be submitted as a hard copy, this should be done in duplicate in a plastic folder at the Institute secretariat. In all cases, a digital version (as a Word- or LaTeX document and as a PDF file) has to be submitted via e-mail (isto@bwl.uni-muenchen.de or alternative address if previously arranged).

Final theses are bound and submitted in duplicate at the [Informations- und Servicecenter Wirtschaftswissenschaftliche Prüfungen \(ISC\)](#) during the office hours.¹ In addition, a digital version (as a Word- or LaTeX document and as a PDF file) is provided to the supervisor.

8 Helpful Literature

There exist a multitude of guidebooks on the form and content of scientific papers. Examples include:

Eco, Umberto (2010): *Wie man eine wissenschaftliche Abschlussarbeit schreibt: Doktor-, Diplom- und Masterarbeit in den Geistes- und Sozialwissenschaften*, 13. Auflage, UTB, Stuttgart.

Franck, Norbert / Stary, Joachim (2009): *Die Technik wissenschaftlichen Arbeitens: Eine praktische Anleitung*, 15. überarbeitete Auflage, UTB, Stuttgart.

Standop, Ewald / Meyer, Matthias (2008): *Die Form der wissenschaftlichen Arbeit: Grundlagen, Technik und Praxis für Schule, Studium und Beruf*, 18. bearbeitete und erweiterte Auflage, Quelle & Meyer, Wiebelsheim.

Theisen, Manuel R. (2008): *Wissenschaftliches Arbeiten: Technik - Methodik - Form*, 14. neu bearbeitete Auflage, Vahlen, München.

¹ More detailed information can be found in the [information on final theses at the ISTO](#) as well as on the [website of the ISC](#).

Hints regarding the editing of larger documents by dint of word processing programs can e.g. be found in the following books:

Nicol, Natascha / Albrecht, Ralf (2010): *Wissenschaftliche Arbeiten schreiben mit Word 2010: Formvollendete und normgerechte Examens-, Diplom- und Doktorarbeiten*, 7. aktualisierte Auflage, Addison-Wesley, München.

Schlager, Petra / Thibud, Manfred (2007): *Wissenschaftlich mit LaTeX arbeiten*, 1.Auflage, Pearson Studium, München.

Mittelbach, Frank / Goossens, Michel (2010): *Der LaTeX-Begleiter: Bafög-Ausgabe*, 2. überarbeitete und erweiterte Auflage, Pearson Studium, München.

Appendix A: Sample Title Page

Ludwig-Maximilians-Universität München
Munich School of Management
Institute for Strategy, Technology and Organization
Prof. Dr. Tobias Kretschmer

Do MVNOs Enter in Markets with Weak Incumbents?

Max Mustermann

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BWL Bachelor (PO 08)
6th Term of Studying
Student Number 12345678

Appendix B: Sample for the Declaration of Authenticity

Declaration of Authenticity

The work contained in this thesis is original and has not been previously submitted for examination which has led to the award of a degree.

To the best of my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made.

Place, Date

Signature