

Information for Writing a Final Thesis/ Paper

1 General Information

The following notes are meant as an assistance regarding the writing of final assignments (homework assignments, master and bachelor theses). The information includes mandatory *guidelines*, resulting from the examination regulations as well as *recommendations* that especially focus on the *formal* layout. Moreover, there is a specific *framework*, such as *fundamental requirements* of a correct citation method. Regardless of whether the recommendations are adopted, the principle of a *uniform and consistent form of presentation* throughout the entire thesis needs to be maintained. For content-related issues, please consult our “*Guidelines for bachelor and master thesis in SCOM major at HWR Berlin*”.

2 Text / Layout Design

Following information is essential for the formal layout.

2.1 Page Layout and Line Spacing

The page layout should be based on the following structure (*maximum* values !!):

- Left margin: 3 cm
- Right margin: 2 cm
- Distance top/ bottom: 2,5 cm

The line spacing should be *maximum* 16 points (Settings Design/ Line Spacing/ Exactly), (or minimum 14 points) as well as 6 points at the end of a paragraph. The spacing between heading and following paragraph (Settings Exactly/ 16 points) should not be more than 18 points to the top and 3 points to the bottom. The first line of paragraphs that aren't followed by a heading, bullet, figure or table should have an indent of 0,5cm

2.2 Font

Choosing the font one needs to ensure the readability, whereby the possible influences of the typeface through copying must be considered. An appropriate font is *Times (New) Roman*, especially with a view to its very broad spread.

Times (New) Roman, Size 12 Point Bold (Headings)

Times (New) Roman, Size 12 Point (Text, graphic and table caption), whereby for example **Fig. 3.1:** ... (Text) can be highlighted by using bold

Times (New) Roman, Size 10 Point (Footnotes, References)

2.3 Design of figures and tables

Figures and tables need to be *designed consistently and readable*, including the used graphic items as well as the used font. Furthermore it must be considered that figures and tables need to fit in the text optically, which means the strength of the lines / arrows as well as the chosen scale of the graphic items should be within an appropriate framework. Moreover figures need

to have a frame and as well as tables, be integrated central within the text area. Figure and table captions need to be positioned centrally below the concerning figure/ table, avoiding multiline texts. Tables with more than one line need to be divided into a suitable form, whereby numbering such as **a, **b, etc. or ** (Part 1), **(Part 2) can be used.

3 Information of implementation

Creating the text, one should consider various aspects that on the one hand lead to *clarity* and on the other hand contribute to a better *understanding* of the text. Primarily these are the following aspects.

3.1 Basic structure

The content shall be based on following basic structure:

- Cover (Outer cover)
- Cover page (Empty or if necessary non-disclosure notice)
- Title page (Inner cover)
- Content including (!) page references
- List of Abbreviations (if necessary)
- List of Figures and Tables
- Text
- References (see point 4)
- List of Appendixes (if there are more than two separately disclosed appendix-parts)
- Appendix
- Affidavit

The list of abbreviations as well as list of figures and tables can also be placed after the references.

Each heading needs to include a belonging text. Furthermore in case of using (for example) a subdivision in paragraph 1.1, *at least* one more paragraph (1.2) must follow.

3.2 Size of Sections

The individual sections should be of sufficient scope, which, generally speaking, should *not fall below one page*. Hereby one should on the one hand adhere a visually recognizable structure and on the other hand recognize a reference between font and size.

- The provided symbols (Dingbats) should be used accordingly.
- Numbering (1), (2), ... or (a), (b), that won't be used within the following text should be avoided.
- The use of a hyphen should be avoided.

Regardless of which symbols are used, it needs to be in a consisted form within the whole text of the thesis.

3.3 Inclusion of Figures and Tables

In general figures and tables need to be referred to in the text. A figure or table number must be *stated explicitly*. The position of the figure or table should generally be provided immedi-

ately after the paragraph that contains the first reference. In case this is impossible due to the size, the figure/ tables should appear on the following page, whereby the previous page needs to be filled in with text accordingly.

3.4 Use of Abbreviations

In most cases abbreviations are very useful, nevertheless they should not be used in headings of sections / paragraphs and, of course, not in the title of the thesis. If an abbreviation is used, it needs to be explained at the first occurrence in the text in an explicit form. A possible procedure might look like the following:

European Union (EU)

After the determination of an abbreviation within the text, the abbreviation has to be used in the course of the text in general, except for headings. To facilitate the handling of abbreviations, one should create a list of abbreviations (in alphabetical order).

3.5 Citation Method

All of the *text segments/ content* obtained from sources need to *be clearly marked* within the text (as seen below). The required information regarding the sources are part of the references (as seen below). Sources that are not explicitly used in the thesis are not to be motioned in the references.

The citation is supposed to be integrated immediately in the text as far as possible. Hereby (as well as in footnotes, see point 3.6), the name and year of the source/ the author needs to be mentioned within the text, like for example Müller (1993) says ... or ... Müller and Schule (1965) say .., any indications (see Müller 1993) or rather (cf. Müller / Schule 1965). In case there are less than three authors, they have to be cited explicitly; otherwise it is common to use the first author with the addition “et al.” during a citation within the text (Meyer et al. 2000). A numbering of sources (for example with continuing numbers ([12])) or the use of abbreviations (for example [MUE1/INF]) should be avoided *in general*. Furthermore, the use of the citation method “loc. cit.” should not be used as well as any further information regarding the title of the cited work, since this is redundant. Necessary information of each source are part of the references.

Monographs need a page reference *in general* (for example Müller 1993, p. 120; ... pp. 120 or p.120-125 or Müller 1993: p. 129; etc.). Journal papers and book chapters do not need this information, since the pages are given in the respective references in the reference list (which is *absolutely essential*) reaches a sufficient accuracy.

3.6 Footnotes

In general footnotes¹ are numbered page by page. Therefore, they have to be integrated page-related. The separation to the text is achieved through a ca. 6cm long line, which is created through word automatically. A relevant example is shown below.

¹ In the footnotes it should be recognizable whether it is a specific information regartin a specific source (for example: s. Mayer 1981) or an information regarding one of many sources (For example: compare inter alia Müller-Schmitt 1975 and Schulzendorf 1962).

4 References

Different possibilities with specific regulations can occur while citing sources. Those options will be displayed in its essential form in the following examples. The used structure is *not fundamental* for the subdivision of the references; it is only used in this case to achieve a clear structure. In general the sources must be listed in abecedarian sequence, regardless of the type of the source.

4.1 Books

Ivanov, D., Tsipoulanidis, A., Schönberger, J. (2017): Global Supply Chain and Operations Management, Springer Nature, Switzerland.

Ivanov, D., Sokolov B. (2010): Adaptive Supply Chain Management, Springer, London

4.2 Contributed books

Dolgui A., Grubbström R., Ivanov D., Yalaoui F. (Eds.) (2016). 8th IFAC Conference on Manufacturing Modelling, Management and Control, Troyes, France, June 28-30, 2016. IFAC-PapersOnLine 49(12), 1-1962.

4.3 Book chapters

Ivanov, D., Sokolov, B., Solovyeva I. (2016). Integrated planning and scheduling with dynamic analysis and control of service level and costs. In Talbi E.G., Yalaoui, F., Amodeo L. (Eds.) *Metaheuristics for Production Scheduling*, Springer, pp. 263-283

4.4 Journal papers (volume-related citation)

Ivanov D., Sokolov B., Pavlov A., Dolgui A., Pavlov D. (2016). Disruption-driven supply chain (re)-planning and performance impact assessment with consideration of pro-active and recovery policies. **Transportation Research: Part E**, 90, 7-24.

4.5 Journal papers (issue-related citation)

Ivanov D. (2017) Simulation-based ripple effect modelling in the supply chain. *International Journal of Production Research*, 55(7), 2083-2101.

Ivanov, D., Sokolov, B., Dolgui, A. (2014) The Ripple effect in supply chains: trade-off ‘efficiency-flexibility-resilience’ in disruption management, **International Journal of Production Research**, 52(7), 2154-2172.

Ivanov D., Sokolov B., Pavlov A. (2014) Optimal distribution (re)planning in a centralized multi-stage network under conditions of ripple effect and structure dynamics, **European Journal of Operational Research**, 237(2), 758-770.

Ivanov D., Sokolov B. (2013) Control and system-theoretic identification of the supply chain dynamics domain for planning, analysis, and adaptation of performance under uncertainty, **European Journal of Operational Research**, 224(2), 313-323.

4.6 Conference papers

Zschorn L., Mueller S., Ivanov, D. (2016). Cost analysis of capacity flexibility in a hybrid multiple-line production system at Siemens AG. IFAC-PapersOnLine 49(12), **8th IFAC Conference on Manufacturing Modelling, Management and Control (MIM 2016)**, Edited by Alexandre Dolgui, Robert Grubbström, Dmitry Ivanov and Farouk Yalaoui, pp. 1278-1282.

Ivanov, D., Sokolov, B., Hartl, R., Pavlov, A. (2013). Structure dynamics control-based integration of aggregate distribution and dynamic transportation planning. Proceedings of the **IFAC Conference on Manufacturing Modelling, Management and Control (MIM'13)**, St. Petersburg, Russia, June 19-21, 2013, A. Dolgui, N. Bakhtadze (Eds.), Elsevier Science, pp. 1920-1925.

4.7 Sources from the Internet

In case of using information from the internet, the entire URL-address needs to be stated. In addition to the address, the date on which the information has been taken from the internet needs to be added. Furthermore, it is advisable to archive the gathered information immediately in appropriate form, since a renewed access (even on the following day) might perhaps not

be possible since the page could be deleted or changed. Moreover, each source from the internet must be archived in appropriate form according to the examination regulations.

Ivanov D. (2017): Supply Chain and Operations Simulation with AnyLogic 7. <https://www.anylogic.com/resources/books/operations-and-supply-chain-simulation-with-anylogic/> (May 8, 2017)

4.8 Sources without Author Statement

o.V. (1995): Monitorwände in Stadtbahnanlagen. in: Kommunalwirtschaft Sonderheft VDV 10/95, 69 (Bei englischsprachigen Titeln wird "anonymous" statt o.V. verwendet.)

o.V. (2001): E-Commerce im Versandhandel - Quelle trotz dem Trend. in: Logistik heute 23(7/8), 18 - 20

o.V. (2004): BMW Werk München - Synchronisierter LKW-Verkehr. in: ident 9(7), 38 - 39

4.9 Special cases

In case of a situation in which the author or the same authors are included in more than one source within a year, the addition of a, b, etc. is used to make a distinction, for example, Müller (1989a) and Müller (1989b).

o.V. (2000a): E-Commerce mit leistungsfähiger Fulfillment-Software. in: Distribution 31(6), 16 - 17

o.V. (2000b): Tschibo Versandhandel - Outsourcing fürs E-Commerce. in: Logistik heute 22(4), 64 - 65

Planco Consulting GmbH (2003a): Potenziale und Zukunft der deutschen Binnenschifffahrt - Schlussfolgerungen und Empfehlungen. Gutachten im Auftrag des Bundesministerium für Verkehr, Bau- und Wohnungswesen.

Planco Consulting GmbH (2003b): Potenziale und Zukunft der deutschen Binnenschifffahrt - Erläuterungsbericht. Gutachten im Auftrag des Bundesministerium für Verkehr, Bau- und Wohnungswesen.

In case of using a personal contact as a source (written or telephone enquiry, face-to-face conversation etc.), they need to be cited analogous to the above-mentioned models. This means mentioning a person (as a author), including the year specification as a foundation of quotation. Furthermore, the text depends on the specific situation (for example: Meyer, A. (2005): Telephone Conversation with the Purchasing Manager Company Müller AG at 23 Sep 2005).

Secondary quotes should be avoided if possible. If using such quotes, a note regarding the specific quote must follow, as shown in following:... Müller (1932) says to this ... (s. Meyer 1992, p. 23f). Both sources, Müller (1932) and Meyer (1992) have to be listed in the references, whereby a note regarding the information of Müller must be added (quoted after Meyer 1992).

5 Documents to Submit

Next to the printed version of the thesis/ paper (according to the examination regulations), the following documents must be added:

- Text of the paper as word document (*.doc and *.pdf) (CD).
- *All sources* from the internet including *complete* texts / text parts (CD).
- Papers: Required *Coversheet* (Deckblatt) (in case of group work with clear information of the different paragraphs edited by the single group members).