





Guidelines for the writing of master theses

The following guidelines have been issued for the unified writing of master theses at the Institute of Human Factors and Technology Management (IAT) and the Fraunhofer Institute for Industrial Engineering (IAO). They are binding for students and their supervisors.

Status: December 2024

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For reasons of readability, masculine and feminine or diverse forms of language are not listed side by side in this guideline. All personal statements always apply to women, diverse persons as well as men.

1 Flowcharts

In this chapter, the general processes for master theses are first visualized in the form of flowcharts. A more detailed explanation of the individual steps will follow in the next chapters.

1.1 Flowchart for the writing of master theses

Flowchart for the writing of master theses



Contact with the IAT: Selection of a topic and personal agreement on the work content with the respective supervisor

Obtain proof of admission to the Master's thesis (72 ECTS according to \$24 (3) PO) from the Examination Office or directly from C@mpus

Registration of the thesis by phone, digitally or by arrangement in person (by appointment, e.g. by e-mail) at the BfS:

The student sends the following by e-mail:

- · Master thesis registration form from the Examination Office
- The student receives
- by e-mail: Internal registration form, number of the thesis, accompanying sheet, Guidelines for the realization of master theses, Assignment sheet with official start and submission date, form for brief report

Registration of the thesis with the examination office by the student

Student confirms registration with the examination office to the BfS

Creating the assignment sheet together with the supervisor

Submission of the assingnment sheet by e-mail to the BfS for approval by Prof. Hölzle (after approval, the supervisor receives the original assignment sheet digitally signed back)

Writing the thesis in compliance with the guidelines

Registration for the Bachelor thesis presentation at the BfS

Presentation within the last 4 weeks before submission of the thesis

Digital or personal submission of the thesis to the supervisor: The supervisor digitally signs the original assignment sheet and the accompanying sheet with the submission date of the paper

- Digital or personal submission of the thesis to the BfS with prior appointment (phone call/e-mail):
- Original assignment sheet with digital signatures
- Brief report
- Accompanying sheet with digital signatures
- 1 digital copy of the thesis
- For the moment furthermore printing of the thesis and filing in the green eyelet binder + CD/DVD creation by the BfS
- Grant of rights (optional)

Supervisor reviews thesis and sends digital evaluation form with grade suggestion to the BfS

Examination of the thesis by Prof. Hölzle

The BfS reports the grade to the examination office

1.2 Writing of master theses Business Administration, technical oriented

Currently, the writing of a master thesis on the part of the B.Sc. Business Administration, technically oriented is only possible within the context of a case-by-case examination upon application to the chairperson of the Economics Examination Board.

In this regard, please contact the Office for Student Affairs (BfS) in confidence. They will be happy to help you.

2 Thesis Registration

2.1 Which theses must be registered at the BfS?

All master theses carried out at or in cooperation with the IAT or IAO must be registered with the Office for Student Affairs (BfS). This includes theses done by students of the University of Stuttgart as well as by students of other institutions (universities, universities of applied sciences, etc.). This is necessary because the BfS is responsible for recording and archiving all theses done in-house.

2.2 What has to be considered regarding the registration at the BfS?

After the student has found a task at the institute and has agreed on a mutually binding work program with the respective supervisor, the thesis must be registered at the BfS. In addition, proof of admission to the master thesis (minimum number of credit points required according to the respective examination regulations) must be obtained at the examination office and submitted to the BfS without being asked.

The registration of the thesis is done in a digital-telephonic combination (telephone arrangement of the key data of the thesis and digital exchange of all related documents) or in person at the Office for Student Affairs by appointment.

Each work is assigned an identification number, which must be indicated on all relevant documents (sketch sheets, drawings, pictures, protocols, etc.).

Upon registration, the student will also receive an accompanying sheet documenting all necessary key data (topic, start and end dates, supervisor, etc.), which will remain with the student until submission. The templates for the other required forms, the assignment sheet and the short report, are sent to the student electronically after registration. The samples of all forms can be found at the end of this guideline (see page 26 ff).

The official start date for the thesis is the date on the Exam registration!

The student and according supervisor jointly prepare the task sheet for the thesis. This contains a detailed description of the work program or the task. It is to be submitted promptly by e-mail to the BfS for approval by Prof. Hölzle.

Only by an approved task order the thesis is valid as officially supervised by the IAT!

The original of the digitally approved assignment is sent by the BfS to the supervisor by e-mail. When submitting the work, the supervisor notes the submission date on the task sheet and confirms this with digital signature. There must be at **least 4 months** between the start date on the task sheet and the submission of the thesis!

The above regulations apply to all study programs of the University of Stuttgart supervised by the institutes, unless explicit attention is drawn to deviations in the following.

The procedure for work by students belonging to other institutions must be discussed with the BfS on a case-by-case basis.

In all cases, the provisions of the examination regulations for the corresponding course of study at the University of Stuttgart or the university (of applied science) at which the student is enrolled.

2.3 Degree programs of the Joint Commission Mechanical Engineering of Universität Stuttgart (GKM)

Degree programs:

Energy Engineering; Automotive Engineering; Mechanical Engineering; Mechanical Engineering/Microtechnology, Instrument Engineering and Technical Optics; Mechanical Engineering/Product Development and Design Engineering; Mechanical Engineering/Materials and Production Engineering; Mechatronics; Medical Engineering; Photonic Engineering; Technical Biology; Technical Cybernetics; Technology Management; Process Engineering

Processing time

The deadlines specified in the study and examination regulations apply to the processing time: Master theses are estimated to require 900 hours of work, to be completed within a period of 6 months.

If the time specified in the study and examination regulations is not sufficient to work on the given topic, the student is obliged to consult with the respective supervisor in due time. The reasons for the non-compliance with the processing time are to be explained to the supervisor. In justified cases, the supervisor may shorten the assignment. This must be communicated to the BfS. In addition, an extension of the processing time by a maximum of 3 months can be requested from the responsible professor (Prof. Hölzle).

Registration

See chapter 2.1 and 2.2.

2.4 Degree program: Business Administration, technically oriented

Processing time

For the processing time of the master thesis, the time limit of 20 weeks specified in the study and examination regulations (Degree program: Business Administration, technically oriented) applies.

If this time is not sufficient for the processing of the given topic, the supervisor must be consulted in due time. The reasons for the non-compliance with the processing time are to be explained to the supervisor. An extension of the processing time of the master thesis by a **maximum of 8 weeks** can only be approved in justified cases by the chairperson of the Economics Examination Board. For this purpose, the student applies for the extension of the processing time by means of **a justified letter addressed to the chairman of the examination board** and submits it to the supervising chair (here: BfS). The BfS forwards this letter to the first examiner of the master thesis (Prof. Hölzle). This person endorses the extension (e.g. by a note on the student's letter). The student's request and endorsement must be sent to the Economics Examination Board in due time before the original deadline for completion. The Examination Board informs the Examination Office of the new deadline for submission of the master thesis. In addition, the BfS is to be informed about the approval or non-approval.

Registration

The following deviations from the above provisions (see chapters 2.1 and 2.2) must be taken into account:

- When registering, the start and end dates of the work are **bindingly** determined.
- In addition, the second examiner of the thesis must be named by BWI. Without the indication of a second examiner at BWI, the work **cannot** be registered at BfS. For this purpose, an informal proof of the second examiner (e.g. confirmation written by e-mail) has to be submitted to the BfS at **the time of registration**.

2.5 Other degree programs and external students

As a rule, the same regulations apply to the completion of master theses by students from other programs as apply to students of Technology Management or other Degree programs of the Joint Commission Mechanical Engineering of Universität Stuttgart (GKM).

As a rule, the thesis must be approved by an institute of the respective faculty. For external students, the guidelines of the respective university apply. When registering, the student has to name his examiner, if necessary his second examiner. Without the specification of the examiner, the thesis cannot be registered at the BfS.

The first examiner is always a professor from the external university. Usually, Professor Hölzle acts as the respective second examiner for papers from other degree programs and external papers. For external students, Fraunhofer IAO can also act as a company. In this case, the first examiner only receives an expert opinion and grade proposal.

2.6 External master theses

External master theses are papers which are written by students of the University of Stuttgart, but which are usually completely or partially initiated and/or completed externally. As a rule, these are theses assigned by companies. External master theses are possible if the student can provide a supervisor from the University of Stuttgart.

3 Writing, scope and submission of the thesis

3.1 Writing of the thesis

During the realization of the thesis, the student is supervised by an academic employee of the institute. The supervisor's task is to introduce the student to the topic, to provide advice and support during the work, and to monitor the progress of the thesis. This should always be done in the interest of both sides. A constant exchange of information between student and supervisor is recommended.

For experimental work, workstations are available in the experimental field and in the laboratories. The workstations at the institute can generally only be used during the presence of the supervisor or representative. Equipment and tools are provided by the supervisors in the workshops and laboratories.

Students can also lend media from the institute library during processing. To do so, they must register as a user with the library. The BfS is the contact for all formal questions concerning the thesis.

3.2 Scope of thesis

The master thesis is a qualifying thesis in which the student has to work on a defined topic. The student is expected to deal with the given topic in a structured, factual and technical manner and to present the results briefly and concisely in scientific formulation. The length of the paper should be within a range of approx. **80-100 pages** (at least 80 pages of continuous text without outline, appendix, etc.), whereby the exact formal requirements (except for the minimum number of pages) are always to be defined by the supervisor individually and on the basis of the assignment.

3.3 Thesis submission

Upon submission, the supervisor checks the original copy (in the form requested by the supervisor), the electronic version (CD/DVD/USB stick) and the short report for form and completeness, always observing the formal structure and citation guidelines given in these guidelines. By **entering the submission date** and the **digital signature on the** original assignment sheet and on the accompanying sheet, the supervisor confirms the correct submission of the thesis.

Attention: The thesis will only be accepted if the BfS has a valid registration of the thesis at the examination office!

After that, the student arranges a digital-remote or personal submission of the work to the BfS with the following documents:

- Original task sheet

Digitally approved by Prof. Hölzle, dated and digitally signed by the supervisor.

- Short report

The short report should give an unbiased reader an overview of the content and results of the work (summary, no table of contents). The length of the short report should not exceed the **one-page** limit provided on the form.

- Digital accompanying sheet

In addition to some organizational data, the accompanying sheet contains a statement about the independent processing of the thesis as well as the relief of the institute library. The signature of the library director certifies the return of all borrowed books and journals. The relief is required even if the institute library was not used.

Two copies of the work

To be handed in at present is one electronic copy of the thesis. For the time being, the BfS will continue to take care of the reproduction of the paper (green eyelet half-folder - normally available free of charge at the BfS upon delivery) and the production of the electronic form on digital media (CD/DVD). We reserve the right to change this regulation introduced for the pandemic again in the foreseeable future.

- **Granting of rights (voluntary/ optional)**See chapter 6 (page 25).

Please submit all forms in digital version to the BfS by e-mail.

Only if all forms are present, the thesis will be accepted.

3.4 Issuance of certificates of achievement for master theses

When submitting the master thesis, students often request that a certificate of achievement (4.0 confirmation) be issued.

»4.0 Confirmation«

The BfS will only enter the application for the official "4.0 confirmation" in C@mpus for the student (vis-à-vis the Examination Office) under the following conditions:

- The student has handed in his master thesis at the BfS properly, i.e. with all required documents.
- The submitted thesis is graded according to the supervisor with at least the grade 4.0 (sufficient).
- The supervisor requests a »4.0 confirmation« in the BfS with the following text:

Mr. cand. tema. / mach. first name last name (matr. no.)

has written his master thesis with the topic "XXX..."

submitted on the **date** and this is evaluated with at least the grade **4.0** (sufficient). I hereby request that a »4.0 confirmation« be issued for the above named student should all other required criteria be met.

Name supervisor

- This request can also be made electronically to the BfS.
- The presentation for the master thesis was graded at least 4.0.

Based on this request, the BfS, with the approval of Prof. Hölzle, sends the application for the official »4.0 confirmation« to the examination office by entering it in C@mpus.

»3.0 Confirmation« for the Degree program: Business Administration, technically oriented

Due to the formation of the arithmetic mean of the grades of the first and second examiners at the examination office, students of the degree program: Business Administration, technically oriented can only be issued a certificate relevant to the »4.0 confirmation« if it has been confirmed on the part of the IAT that the thesis is evaluated with at least 3.0 (satisfactory). When the BfS issues this »3.0 confirmation«, the following conditions must be met:

- The student has duly registered his master thesis at the examination office.
- The student has duly submitted all required documents to the appropriate offices.
- The supervisor requests a »3.0 confirmation« in the BfS with the following text:

Mr. cand. rer. pol. first name last name (matr. no.)

has written his master thesis with the topic "XXX..."

submitted on the **date** and this is evaluated with at least the grade **3.0** (satisfactory). I hereby request that a »3.0 confirmation« be issued for the above named student should all other required criteria be met.

Name supervisor

- This request can also be made electronically to the BfS.

Based on this request, the BfS will prepare a »3.0 confirmation«, which will be approved by Prof. Hölzle and directly send to the Economics Examination Board.

3.5 Presentation of the results of the master thesis

Part of the master thesis is a presentation of **20-30 minutes** about its content. The presentation is included with **20**% in the evaluation of the master thesis. The presentation should ideally take place within the last 4 weeks (of the 6-month processing period) before the thesis is submitted to the BfS. However, registration for the presentation is only possible after the minimum processing time of the thesis of 3 months has elapsed. For this purpose, the student arranges a date for the presentation by telephone or by e-mail at the BfS by selection from possible given date suggestions. The possible dates for the presentation are determined by the BfS and announced on the Internet.

The subject of the presentation should be an interesting excerpt from the master thesis. The presentation is to be given freely.

It is recommended to supplement the presentation by using technical aids (PowerPoint and illustrative material). The purpose of the presentation is to promote the ability to present findings gained from the master thesis in an interesting, clear and understandable way, as well as the student's rhetorical skills. Further written instructions for the preparation of the presentation are available at the BfS or on the IAT homepage.

4 Formal structure of the master thesis and instructions for scientific work

4.1 Structure of the master thesis

The work should be documented using a word processing system on paper in DIN-A-4 format. The following formal structure is desired (stapling order):

- 1. Title page
- 2. Copy of the task sheet *(related sample can be found in the appendix to these guidelines).*

- 3. Table of contents (outline)
- 4. List of illustrations (if applicable)
- 5. List of tables (if applicable)
- 6. List of abbreviations (if applicable)
- 7. List of symbols (if applicable)

continuous Page numbering with Roman numerals

8. Work text

(Introduction, main part [continuous chapters], final consideration and conclusion)

9. Attachments

(Tables and drawings that are not absolutely necessary for explanation in the text section are intended to be summarized here)

- 10. Bibliography (according to DIN ISO 690:2010)
- 11. Declaration of independent editing and the aids used.

"I hereby certify that I have not used any aids other than those specified to complete the thesis and that I did not seek any outside assistence." [date/signature]. continuous
Page numbering with
Arabic numerals

4.2 Formatting

Regarding the formal structure and layout of the text, the following guidelines are authoritative.

Margins	Top: 2 cm, Right: 2 cm Bottom: 2.5 cm, Left: 4 cm
Fonts	Arial: 12pt Times New Roman: 12pt
Line spacing	1,5
Alignment	 Justification Left-justified (flatsetting) Hyphenation is recommended in both cases!
Page numbers	 Right-justified or centered Uniform in header or footer All directory pages are numbered using Roman numerals (usually in lower case: i, ii, iii, iv,). Starting from the first continuous text page, all the rest of the thesis is numbered using Arabic numerals, starting from 1.
Footnotes	 Left-justified Separated from body text by horizontal line Font size: 10pt Line spacing within the footnote: 1 Line spacing between two footnotes: 1.5 Alternative to footnotes: Endnotes [= collection of footnotes at the end of a chapter or the paper].
Headings	 Of main sections are set off from the following text by 3 blank lines Of subsections are set off from the following text by 1 blank line
New paragraphs	 Engage 5 strokes, or Separate from the next paragraph by a blank line Main paragraphs (chapters) should start on a new page
Quotes	 As long as they are not longer than 3 lines: → integrate with quotation marks in the body text Longer quotations (> 3 lines) must be written with single line spacing and indented 5 keystrokes or separated from the body text by a blank line.

4.3 Components of a scientific paper

4.3.1 Title page

A title page must be prepared for the master thesis. It should contain the following information:

- Title of the master thesis, course of study, university and date of submission
- Full name of the author, matriculation number
- Examiner, supervisor and address of the institute

The title page should be designed in a uniform and harmonious way to match the overall appearance of the paper (for examples, see chapter 8 Forms). Due to the logo policy of the University of Stuttgart, the institute and university logos may only be used with the note »Submitted to the University of Stuttgart«. (see also here: Logo-Policy) External logos are not allowed on the theses.

4.3.2 Table of contents

The outline must include all chapter and section headings with their full wording. A complete outline enables the author/student to show that he has understood the topic and the associated content and has paid attention to a logical structure when preparing the thesis.

The extent to which a thesis has a logical structure in terms of content can already be seen in part from its formal structure. This should be designed in such a way that it has both superordinate and subordinate topics. Equivalent topics are on the same level in terms of formal structure. It also follows that there must automatically be a chapter 2 as soon as there is a chapter 1, and that a bullet point 2.1 may only exist if it is also followed by a section 2.2. It is not permissible for only one subitem to be listed per level (2., 2.1, 3.). As a rule, each chapter has at least two subchapters (see also example 1 or 2 on p. 16).

In addition to the individual section titles, the table of contents always includes references to the list of abbreviations, list of illustrations and bibliography. If necessary, a list of tables and symbols should also be included.

When structuring the table of contents, the page numbers of the table of contents, as well as those of the list of abbreviations, list of illustrations and list of tables are given in small Roman numerals (example: »I Table of Contents« on page »i«, see also both possible variants on p. 16). However, Arabic numerals are assigned consecutively to the individual chapters of the continuous text as well as the appendix and the bibliography. If the headings of the directories and chapters have been formatted using templates and the page numbers there are already formatted correctly, they will be adopted in this way when the table of contents is automatically generated.

Variant 1 (arrangement with indentations)

I II		able of Contentsi st of illustrationsii					
1	1.1	oduction Initial situation Project implementation	1				
2		damentals of Technology Management					
		2.1.1 Purpose and objective2.1.2 Design of standards	8				
<u>Vai</u>	<u>riant</u>	2 (arrangement with alignment line)					
I		Table of					
II		List of illustrations	ii				
1		Introduction					
1.1		Historical	2				
1.2		The German body of standards	4				
1.2	.1	German Standards Committee	5				
1.2	.2	Name DIN, association mark DIN	5				
1.2	.3	Contents of DIN standards	6				
 1.3		International standardization	9				
1.4		Standardization technology					
1.4	.1	Purpose and objective					
1 /	2	Design of standards					

4.3.3 List of illustrations and tables

All illustrations and tables contained in the master thesis are to be listed in a separate list of illustrations and tables, indicating their number, title and page number.

The images, diagrams and tables contained in the text section are all numbered consecutively in Arabic, as are the images, diagrams and tables that have been separated out into the appendix. Images and diagrams are equally listed in the list of illustrations, while tables are listed in the list of tables.

For the preparation of technical drawings, the relevant DIN regulations must be observed.

4.3.4 List of abbreviations and symbols

All abbreviations used in the context of the master thesis must be listed and defined in alphabetical order in a list of abbreviations to be prepared specifically for this purpose, with the abbreviations on the left and the associated explanations on the right side.

In principle, abbreviations should be used as sparingly as possible. Apart from a few exceptions, such as »etc.« or »e.g.« and those for currencies (€, \$), their use should be limited to abbreviations common in the respective technical jargon, as well as to titles / names of (technical) journals (e&i, faz, etc.), institutions (EU, GATT) or companies (BASF, SAP).

If the master thesis contains formulas with (mathematical) symbols, an alphabetically sorted list of symbols must also be provided.

4.3.5 Text of the thesis

4.3.5.1 Language and style

The master thesis should be formulated independently by each student, whereby care must be taken that it is coherent in terms of content and that it provides the reader with the easiest possible access to the subject matter. Among other things, a grammatically correct sentence structure, the definition of the terms used as well as an always purpose-oriented use of specific technical vocabulary are conducive to this goal. Furthermore, it should be noted that the work must be written in **present tense**.

4.3.5.2 Structure

In every scientific paper, the actual (flowing) text is divided into three central elements: *introduction, main body* and *conclusion.*

The subject of the *introduction* is the description of the task/problem, as well as the (justification for the) content-related delimitation to neighboring topics. In addition, the introduction should provide the content structure of the work as well as the procedure.

The *main part* of the thesis serves the author / student of the intensive discussion of the previously delimited topic analogous to the process outlined in the table of contents.

In the *final part (conclusion)* of the master thesis, the results obtained in the main part are presented in a condensed form. Furthermore, the conclusion can be used by the students to evaluate the results of the work and to give an outlook on further research needs in connection with the topic worked on.

Also note that in a scientific paper, no chapter or subchapter exists without associated text. For example, a text under »4.3.5 Text of the thesis« (see above) would be mandatory.

4.3.6 Appendix

The appendix of a scientific thesis functions as a possibility for an author to document his elaborated results. Therefore, all the material that is referred to in the thesis is generally placed in the appendix. This includes, for example, diagrams, statistics, measurement protocols, (extensive) mathematical proofs or also interview protocols, as well as printouts from the Internet.

Sources that are not generally accessible or unpublished must also be included in the appendix, unless there are legal reasons to the contrary. In these cases, such sources should generally be avoided and their inclusion in the flowing text should also be dispensed with.

On the other hand, all content that is important for understanding the text should be included in the flowing text, not in the appendix.

4.3.7 Bibliography

The bibliography contains a complete and alphabetically sorted collection of all sources cited in the context of the master thesis. At this point, it should be noted that quotations from Wikipedia or other encyclopedias should be avoided.

How the sources are to be indicated in the bibliography in detail is described in the DIN ISO 690:2010 »Information and documentation - Guidelines for title information and citation of information resources«. The most important rules anchored therein are listed below with associated examples. The ISBN and/or DOI are not mentioned.

Rules and related examples (adapted to a possible use of Citavi as literature management):

Monographs / Reference books

All auth 2nd;	• •	Edition description. (if available)	Place(s) of publication:	Publisher,	Year
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Spath, Dieter; Linder, Christian; Seidenstricker, Sven: Technologiemanagement. Stuttgart: Fraunhofer Verlag, 2011

Monograph: Editorial work with multiple authors

Bullinger, Hans-Jörg (ed.) et al: Neue Organisationsformen im Unternehmen. 2nd, newly edited and expanded ed. Berlin: Springer, 2003

Dissertation; university edition

Langlotz, Martin: Konzept zur Unterstützung von Entscheidungsprozessen in der Produktentwicklung. Kaiserslautern, Techn. Univ., Diss., 2011

Dissertation, also published by the publisher

Author:	Dissertation title.	Place of publica- tion:	Publis- her,	Year.	Authori- zed:	Loca- tion,	Univer- sity,	Dissertation note,	Year
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Schnabel, Ulrich: Management des intellektuellen Kapitals wissensintensiver Dienstleister. Wiesbaden: Springer Gabler, 2013. Authorized: Stuttgart, Univ., Diss., 2013.

Conference (not published by the publisher):

Conferer	nce title:	Subtitle.	Time and location of the conference.	Location: Publisher / Organizer,	Year
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Produktionsunternehmen wettbewerbsfähig organisieren: Conference. 09.07.2004, Stuttgart. Stuttgart: Fraunhofer-Institut für Arbeitswirtschaft und Organisation, 2004.

Conference proceedings (volume as publisher's publication):

P	ublisher (person or in- stitution):	Conference title:	Subtitle.	Time and location of the con- ference.	Place of publication:	Publis- her,	Year	
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Dieter Spath (Ed.): Business Development durch Corporate Venturing: Innovative Ansätze und Methoden zur Geschäftsentwicklung, Forum Innovationsmanagement 2004. July 2004, Stuttgart: Fraunhofer IRB-Verlag, 2004

Essay in monographs

All authors (1st; 2nd; etc.):	Essay title.	In: Author or ed. (if available): Title of the Monograph.	Loca- tion:	Publis- her,	Year,	Page- reference
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Schimpf, Sven; Heubach, Daniel; Rummel, Silvia: Technologieentwicklung als Innovationstreiber in bestehenden und disruptiven Märkten – von der Beobachtung zur Umsetzung. In: Thomas Abele (Ed.): Die frühe Phase des Innovationsprozesses. Wiesbaden: Springer Gabler, 2016, pp. 31-49.

Essay in journals

All authors (1st; 2nd; etc.): In: Title of the journal Issue Vintage (year)	ue no,	Page reference
------------------------------------------------------------------------------	--------	----------------

Spath, Dieter; Schnabel, Ulrich: Das Intellectual Capital Management Toolset: Erfolgsfaktoren und Metrics zur Steuerung des intellektuellen Kapitals. In: Personalführung 38 (2005) No. 4, pp. 30-40.

Essay in a conference proceedings:

All autho	• •	Essay title.	In: Publisher (if available): Title of the proceedings:	Sub- title.	Time and location of the conference.		Publisher,	Year,	Page refe- rence	
-----------	-----	-----------------	---------------------------------------------------------------	----------------	--------------------------------------	--	------------	-------	---------------------	--

Bauer, Wilhelm; Vocke, Christian: Implications of sedentary lifestyle for designing dynamic work in times of digital selfness. In: Ravindra Goonetilleke (Ed.) et al: Advances in Physical Ergonomics and Human Factors: Proceedings of the AHFE 2016 International Conference on Physical Ergonomics and Human Factors. July 27-31, 2016, Walt Disney World, Florida, USA. Cham [et al:] Springer, 2016, pp. 675-685.

Essay in a loose-leaf edition

	uthors (1st; nd; etc.):	Essay title.	In: Publisher (if available): Title of the Loose-leaf edition:	Subtitle.	Loca- tion:	Publis- her,	Year,	Page or section number. (Loose-leaf edition)
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Heubach, Daniel; Beucker, Severin; Lang, Claus: Einsatz von Software Tools im betrieblichen Umweltschutz: Software-Unterstützung in Produktentwicklung und Produktion. In: Herbert Birkhofer (Ed.) u.a.: Umweltgerechte Produktentwicklung: ein Leitfaden für Entwicklung und Konstruktion. Berlin: Beuth, 2000, Chap. 3.4.1.17 (loose-leaf edition).

Norm

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Standard DIN ISO 690. 2013-10. Information und Dokumentation – Richtlinien für Titelangaben und Zitierung von Informationsressourcen

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Institut für Arbeitswissenschaft und Technologiemanagement (IAT): Homepage. [Online] © 2023. [Accessed 01 July 2023]. Available from: https://www.iat.uni-stuttgart.de

Patents (applicant & inventor are identical)

Name of the pa- tent owner/appli- cant:	Title of the Patent- resource.	Name of the inventor (not applicable).	Publication date	Registra- tion Date.	Country name/code	Official name of the patent family (main resource)
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Honda Motor Ltd: Sitzkonstruktion für ein Motorrad. 10.05.2007. Application: 19.05.2004. DE, patent specification DE602004003996T2.

Patents (applicant & inventor are different)

Name of the pa- tent owner/appli-	Title of the Patent-	Name of the inventor.	Publication date	Registra-	Country name/code,	Official name of the patent family (main
cant:	resource.	mventor.	uute	tion date.	name, coue,	resource)

Honda Motor Ltd: Sitzkonstruktion für ein Motorrad. Inventor: Yutaka Murata; Masao Ogawa. 10.05.2007. Application: 19.05.2004. DE, patent specification DE602004003996T2.

On the IAT homepage you can download a citation style (Harvard Style + Chicago Style) created for Citavi (for Windows users) with comments. Following the discontinuation of student licenses for Citavi Web, there is currently no citation style available for download for alternative reference management programs such as Zotero (open-source, cross-plat-form software).

4.4 Quotations

4.4.1 Types of quotations

4.4.1.1 Literal quotations

We always speak of literal quotations when you take over parts of sentences or whole sentences from a text source word for word (= true to original) into your own work. Literal quotations should only be used if both their content and their wording are significant in themselves and fit into the context of the thesis.

Furthermore, when quoting literally, it must be ensured that the quoted text passage is not taken out of context and is not given a meaning other than that intended by the original author by inserting it into the author's own work. These criteria are met, for example, for the definitions of terms used in the thesis.

If one of these criteria is not met, the summary of the text passage in one's own words (= indirect quotation) is preferable to the literal quotation.

In the case of literal quotations, it is possible to add one's own formulations to the quotation. This is usually used when the person quoting wants to emphasize certain contents of the original quotation. Own additions are always emphasized by square brackets and provided with a reference, such as *addition of the author* or the *abbreviation of the author*.

If a certain part of a quotation is to be deliberately omitted, the omitted part of the text is represented by 3 dots in a square bracket as follows: [...]. Omissions serve to reduce the original text part to its essential statement and not to change the original text intention.

Literal quotations are identified as such in the continuous text by placing double quotation marks ("quoted text").

Ex: "A fundamental observation for innovation research is that even different technologies often develop according to similar temporal patterns." (Knaf, H./ Heubach, D. 2008, p. 147)

4.4.1.2 Meaningful quotes

Quotations according to the sense of the text are the rule in scientific work, since in this case foreign thoughts are reproduced by means of independent formulations coherent with the content of the original text. When quoting according to meaning, care must be taken to reproduce the content in the subjunctive. The subjunctive has the function of clearly distinguishing secondary quotations from the author's own statements.

Even with this type of quotation, care must be taken to name the source texts accurately.

Ex: For the design of cost accounting in the R&D area, it does not matter whether the projects are internal or external to the company. Basically, the planning and control of the project process and the costs are similar. (cf. Schäfer, K., 1984)

4.4.1.3 Secondary quotes

Secondary quotations are quotations that originally come from texts by an author 1, to which an author 2 refers in his writings, and where the student does not refer to the original text by author 1 in his work, but to the already quoted text by author 2.

These secondary quotations are to be avoided as a matter of principle, because it cannot be assumed in every case that author 2 has correctly reproduced the content of the original author 1 when quoting. It is therefore expressly recommended to read a text that is to be quoted in its original and not to rely on foreign quotations from other authors.

However, if the original literature is not accessible, a secondary quotation should be identified by the notation "quoted from...".

4.4.1.4 Quotation

In general, it should be emphasized at this point that all quotations, regardless of their nature, must be accompanied by references in order to ensure **the verifiability** of the statements made.

In addition, references serve to identify foreign statements as such and to distinguish them from one's own in this way. On the one hand, this acknowledges the ideas of the person quoted and, on the other hand, ensures that the person quoting (student) cannot be accused of attempted deception in the sense of intellectual theft (plagiarism).

In principle, all publicly accessible works are considered to be quotable sources. If an author wishes to refer to works that are not publicly accessible, he must first obtain the permission of the responsible persons / institutions.

4.4.2 Quotation techniques

Each source reference should provide the reader with the opportunity to read the quotation used in the original context.

As far as the integration of the references into the text is concerned, the author has the possibility to choose between the two variants listed below and usually used in scientific papers:

1.) Harvard Style (= American Short Quotation Style)

In this case, the person quoting (student) includes the source reference in the flowing text directly following the quotation in the following manner:

"Quotation" (author, year of publication, page number)

2.) Chicago Style (= Outsourcing of references to footnotes)

In this quotation technique, there is a superscript number at the end of the quotation that references a footnote at the bottom of the page where the source quotation is located.

Both quotation techniques on their own are permissible in scientific work but must not be mixed within a thesis. Therefore, the importance of deciding on **ONE** of the two quotation techniques **BEFORE** starting the master thesis and to keep it consistently until the end of the thesis should be emphasized at this point.

If a source is quoted that was written by TWO authors, then both last names of the authors must be listed and separated from each other by a diagonal line.

If the number of authors is three or more, only the first author should be named, and the others subsumed under the suffix »et al.«. However, this only applies to references in the flowing text and footnotes; references in the bibliography must be made by naming all authors.

If one has several equally relevant sources for a certain statement/topic, these may be quoted in their entirety in both above-mentioned quotation techniques, in which case the various sources are to be separated from each other by semicolons.

It is advisable to clarify the quotation method with the supervisor(s) in advance. In general, the rules of the respective course of study or the university apply.

4.5 Guidelines for creating images

Decisive for the use of an image, a graphic or a table is a high information content as well as a good presentation quality. Ideally, different content should not be integrated into *one* graphic or table. In this case, use a series of images to illustrate a change or similar. Reproduced images from other sources should be of very good quality and not based on a dark background.

Bold fonts are particularly suitable for labeling graphics. Within a graphic, the number of different fonts and font variants used (**bold**, *italic*, <u>underlined</u>, etc.) should be limited to a maximum of three. In addition, it is recommended to consistently maintain labeling standards in all graphics of a work (e.g., always use italic font for labeling axes, etc.). More than three lines of text in a graphic should therefore be avoided. More extensive information belongs in the text part and not in a graphic.

For the arrangement of the typeface, it should also be remembered that right-justified and centered type is difficult for the reader to grasp. Likewise, the vertical arrangement of contiguous letters is not suitable. Such design elements require extensive experience and should therefore only be used in special cases.

These suggestions are not binding, but their application facilitates the readability and comprehensibility of graphics. In any case, care should be taken to ensure that all graphics within a paper are always produced according to the same scheme. Experience has shown that when preparing a series of images, the most extensive graphic should be used first. Here, the maximum possible font size can be determined, to which all other images of the thesis can be aligned.

4.6 Concluding remarks

The above rules are not the only ones in existence and are therefore not binding in every detail. However, it is recommended to follow the DIN standards.

In principle, there are various permissible ways to structure the text section and bibliography. The rules often differ in the various disciplines and language areas. All master theses written at the Institute of Human Factors and Technology Management must be based on the regulations listed above.

5 Legal relations

Master theses are issued, supervised and examined by a university professor, university lecturer or private lecturer furthermore any scientific employee to whom the examination authority has been assigned in accordance with the legal provisions. If necessary, a thesis may be examined by further reviewers.

The basis for the execution of master theses are the determinations of the respective examination regulations of the University of Stuttgart. Deviations from these determinations - if permissible - are to be **fixed in writing before starting the thesis**. In this context, reference is made in particular for students of the Degree program: Business Administration, technically oriented to the form »Merkblatt zur Anmeldung der Masterarbeit für Studierende des Studiengangs BWL techn.« which can be viewed at the BfS.

The student is bound to secrecy about all documents and communications received in the course of his thesis.

Correspondence of the student with third parties, as far as it concerns the content of the thesis, has to be agreed upon with the supervisor beforehand.

These guidelines also apply if, at the instigation of the Institute, the student works directly or indirectly for third parties to whom the performance of a task has been transferred in whole or in part.

A master thesis without submission of the written elaboration to the examiner does not need to be recognized and graded. This also applies to master theses that have not been registered or have been registered late at the examination office!

In all cases, the provisions of the examination regulations for the corresponding study program apply!

6 Grant of rights

Copyright law requires the student to grant rights for free of charge, time and space-unlimited use (simple right of use in comparison to exclusive right of use) of the work results created as part of the master thesis for research, teaching and study, as well as for publication in the institute library. This granting of rights is voluntary and must be signed and submitted to the BfS with the corresponding form (see Forms, p. 34) upon submission of the thesis.

Please note that if the master thesis is not published, it is not eligible for quotation.

It is advisable to clarify the grant of rights in advance with the supervisor of the master thesis.

7 Use of ChatGPT and other Al-tools in the context of the master thesis

The use of ChatGPT and other AI tools in the context of writing the master thesis is generally not prohibited. The Universität Stuttgart has set up a <u>forum</u> in ILIAS for its employees and students. It serves to exchange experiences and discuss how these tools can be used

in teaching and research. When writing your master thesis, please observe the rules of honesty in scientific practice. The obligation to act with integrity applies to all scientific work (and thus also to the writing of student theses), in particular to the processing of sources (books, journals, magazines, internet sources, etc.) in student theses. This means that using ChatGPT without identifying it contradicts scientific practice. In addition, we would like to point out that you must submit a declaration of independent editing and the aids used as part of the process of writing your master's thesis.

8 Forms

The following pages list the forms required for the master thesis as well as sample cover sheets created based on the logo policy of the University of Stuttgart:

- Internal registration of a master thesis
- Assignment sheet for master thesis
- Brief report for master thesis
- Accompanying sheet for master thesis
- Assessment sheet for master thesis
- Example Cover sheet with logo
- Example Cover page without logo
- Rights granting form

These sheets are for information only!
The originals are issued exclusively by the BfS!

Master Thesis Registration



Master Thesis No.: M	Second examiner (if required).
Surname:	Study programme:
Surname:	University of Stuttgart
First name:	
Date of Birth:	External university/college
Matriculation No.:	
Address:	
Street + House No.	
Postcode + City:	
Phone: E na	il:
Supervisor:/	Start date
Phone of the supervisor:	
Topic of the work:	
- I special and mana	
Declaration:	
I hereby confirm that the information I have	provided is correct in addition, I have
informed myself about the IAT guideline	es for the realisation of Master theses*.
I recognise the legal relationships. The abo	ve-mentioned personal data will be processed
in accordance with §125a para. 1 sentence	2 UG in conjunction with §§1 and 9 of the
Ordinance of the Ministry of Science on the	e collection and processing of personal data for
the purpose of realisation and evaluation M	laster's Theses.
I have been informed that I must registe	r my Master's thesis at the examination
office without delay. The official start da	ate is the date stated on the registration form
	ce+institute) under »Date of assignment« of
the topic!	
*Guidelines are available from the BfS	Date and signature of the student

 \square Registration at the EO has been completed!

Assignment for Master Thesis



for John Doe Matr.-No.: 1234567 Study programme: tema

Topic:

(German & English!)



No. of the thesis:	M 0xxx	Authorised:	
			(Signature of examiner)
Carried out on:	Institute of Huma	n Factors and Technology Management	
Supervised by:	xxxx/xxxxx		
Start date:	xx.xx.24		
Submission date:	xx.xx.24	Delivery on:,	
			(Signature of supervisor)

Brief report for master thesis

Brief Report for

Master Thesis



First + Surname: John Doe

Supervisor-Code/Group: ABC/12345

Submission Date: xx.xx.24

No. of the thesis:

M 04xx

Topic:

Click or tap here to enter text.

Keywords:

Click or tap here to enter text._Click or tap here to enter text._Click or tap here to enter text._Click or tap here to enter text.

Summery:

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	No. of the thesis:											
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	- Grant of rights:			yes: no:								

Assessment sheet for master thesis



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Structure		0		2	1	2	4			6		8			
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MASTER THESIS

TITLE (English)
TITLE (German)

suble litted on
Instrute for Human Factors and Technology Management (IAT)
of the University Stuttgart

From: Max Mustermann

Mat-No.: 1234567 Mustermannstr. XY 99999 Musterstadt

Examiner: Univ.-Prof. Dr. rer. oec. habil. Katharina Hölzle, MBA

Supervisor: Titel + Name

Submission Date: Date. Month Year (01. April 2023)

Address of the institute: IAT Universität Stuttgart, Nobelstr. 12, 70569 Stuttgart

MASTER THESIS

TITLE (English)
TITLE (German)

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(basement floor)

Tel./Fax: 0711/970-2061 / -2299

E-mail: bfs@iat.uni-stuttgart.de

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(Level 2)

Tel: 0711/970-2187

E-mail: bibliothek@iao.fraunhofer.de

Internet: <u>IAO Departmental Library</u>

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Examination Office University of Stuttgart

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Thursday, 9:00 a.m. - 12:00 p.m.

Location: Vaihingen University Area

House of Students

Pfaffenwaldring 5 c // 3rd floor

70569 Stuttgart

Online- Monday, 1:30 p.m. - 2:30 p.m. Office hours: Friday, 10:00 a.m. - 11:00 a.m.

Tel: Outside of in-person office hours and online office hours.

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Examination Office University of Hohenheim

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Department of Student Affairs Examination Office Economics

Schloss Mittelbau, Ground floor, Room 035

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