

Guidance on the design of scientific thesis in the Working Group MI²EO



Term paper / Bachelor / Master thesis

The event ... / To Earning a Bachelor / Master of Science in Course ...

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Table of Contents

1 Introduction	1
2 Initiations and the Beginning of a Thesis.....	2
3 Exposé	3
4 Planning and Management of the Research.....	4
5 Scientific Literature	7
5.1 Literature	7
5.2 Literature Selection for the Thesis	8
5.3 Journals.....	9
6 Conducting Research.....	11
6.1 General Information about the Choice of Research Methods	11
6.2 Qualitative Oriented Research	12
6.3 Quantitative Oriented Research.....	12
7 Requirements for the Language and the Form of the Research	14
7.1 Language Requirements	14
7.1.1 Fundamentals	14
7.1.2 Procedure	14
7.2 Requirements for the Form	15
7.2.1 Outline of the Work.....	15
7.2.2 Paper and Page Format	17
7.2.3 Quotes	18
7.2.4 References and Bibliography.....	19
8 Technical Notes on Registration and Submission of Bachelor and Master Theses	21

List of Figures

Figure 1: Example for project planning of a qualification work (Source: own representation based on Theisen, 2006, 21 ff.)	5
Figure 2: Stage of the Theory education, kind of research, and Methods (own representation based on Riesenhuber, 2007,6).....	11

List of Tables

Table 1: Example - Milestones for the thesis (own representation)	4
Table 2: Summary of the Journals (own representation).....	10

List of Abbreviations

BSc	Bachelor of Science
CEO	Chief Executive Officer
JSBM	Journal of Small Business Management
MSc	Master of Science

1 Introduction

The writing of scientific papers is the central element of university education in general and therefore also a central element for the study of information management. This will enable you to tackle complex issues through a conceptual, analytical approach.

For a choice of topic, please contact the staff of the working group MI2EO directly. Theses in cooperation with companies or in the context of a semester abroad are also supervised, but it should be noted on the one hand that scientifically relevant questions have to be dealt with and, on the other hand, that this can only be done with the agreement and consent of the staff of the working group is possible. It is not desirable to support purely practice-oriented, consulting-like "commissioned work".

The following brief instruction is intended to serve as an orientation and binding procedure for students to prepare their own work.

Deviations from these instructions are to be avoided at all costs, but at least agreed with the supervision of the corresponding work.

If you have any further questions that are not adequately dealt with in this manual, please contact the supervisor.

Plagiarism is considered a delusion in science and therefore also in theses. Even if a deception is recognized only after delivery of the certificate, the university can evaluate the thesis as "failed" and retract the certificate and the bachelor / master certificate (§28 of the "Examination Regulations Bachelor and Master Computer Science").

2 Initiations and the Beginning of a Thesis

On the Website of the Department, you will find the currently advised topics for a thesis. Alternatively, you can approach with a thematic proposal to the Working Group. In that case, send an application, comprising any one of (1) **CV**, (2) **a Motivation letter**, which including a possible topics proposal contains (including research and potential gap research questions) **and (3) one current Transcript of Records** to the department assistant Claire Zerwas (czerwas@uni-koblenz.de).

Please note here that our working group only supervises theses that are within our core area - the management of information, innovation, entrepreneurship and organization - are cared. Due to increased demand for final theses, we would like to point out that we may not can accept all applications.

Please refer:

<https://www.uni-koblenz-landau.de/de/koblenz/fb4/ifm/agvonkorflesch/Lehre/Qualifikationsarbeiten>

3 Exposé

Before the actual work on the thesis, an Exposé must be submitted (This does not apply to the seminar papers). An exposé is a short description of the research project needs to be completed and which fulfills the following functions:

- Development of the question and the methodological approach
- Self-assurance of your own work
- Basis for control and correction

Structure of an Exposé:

- A. Problem statement: Why is this project important and interesting for research and practice? What research gap – if any – exists?
- B. The aim of the thesis: Be explicit naming the research questions.
- C. Description of the methods (literature analysis, qualitative or quantitative methods....).
- D. Structure of the Thesis (See 5.1)
- E. Literature: Select the most relevant literatures

The exposé should be about 4 pages long.

4 Planning and Management of the Research

According to the respective examination policy or seminar requirements, only a limited processing time is available for a scientific research. The goal-oriented and structured research planning and execution are of high Importance for the success of the research.

To ensure the best possible organization, a submission deadline, milestones and a presentation date are specified.

	Master thesis	Bachelor Thesis	Seminar
Deadline	6 months	6 months	Seminar Specific
1. Milestone	Table of Contents & Exposé (after 1 month)	Table of Contents & Exposé (after 3 weeks)	Table of contents
2. Milestone	Intermediate Status (after 2 months)	Intermediate Status (after 2 months)	Interim Status
3. Milestone	Intermediate Status (after 3 months)	-	Delivery
4. Milestone	First Version (after 4 months)	First Version (after 4 months)	-
5. Milestone	Delivery	Delivery	
Presentation	20 minutes + 15 minutes Questions	10 minutes + 10 minutes Questions	Seminar Specific

Table 1: Example - Milestones for the thesis (own representation)

An intermediate status is a text document, which comprises extracts of various text passages of the research which requires a feedback. The length of the intermediate status should be 2-3 pages. The document should be sent in PDF format.

The first version is the entire text document with almost 70% completion of the thesis. The first version should be sent 6 weeks before the deadline for Master thesis and 3 weeks before the deadline for bachelor thesis. The document should be sent in PDF format.

Thus, there is also requirement for a separate project management for the thesis; note for example:

- Use your productive phases for demanding, creative work steps and less productive phases for formal work on the document, the typing of interviews, text corrections, etc.
- Also plan for foreseeable interruptions (public holidays, etc.).
- The thesis planning can be designed as follows:

Project Planning:	
Project:	Qualification Thesis
Duration:weeks
Processing Period:	01.04.2018 – 31.07.2018
Deadline:	31.07.2018, until 16:00
Scheduling:	
Processing Period:	121 days
./..Sundays:	17 days
./..Lecture & Event Dates:	15 days
Full Working Days:	89 days (about 74%)
Planning (incl. meetings):	4 days
Preparation (literatures etc.):	7 days
Exposé:	5 days
Rating:	3 days
Procurement:	6 days
Evaluation:	10 days
Structure:	5 days
Version:	28 days
Corrections:	3 days
Second Version:	12 days
Printing and Binding:	3 days
Total:	86 days

Figure 1: Example for project planning of a qualification work (Source: own representation based on Theisen, 2006, 21 ff.)

This illustration is intended only as a suggestion that should make it clear which work steps have to be taken into account.

Many steps (such as sourcing and evaluating sources) are activities that are relevant for almost the entire processing period.

5 Scientific Literature

5.1 Literature

The University Library in Koblenz, the Rhine State Library and the library of the Fachhochschule Koblenz and WHU - Otto Beisheim School of management offer a variety of opportunities to borrow, find and order different literature.

Especially, the references to the homepage of the University Library offer a good start: <https://www.uni-koblenz-landau.de/de/bibliothek>. For example, the website about the electronic journals can be helpful in the search: <https://www.uni-koblenz-landau.de/de/bibliothek/ezbreadme>. In addition, the training materials "Fit for housework - economics" of the library available: <https://www.uni-koblenz-landau.de/de/bibliothek/service/downloadcenter/schulungsunterlagen>.

In addition, the university has a JSTOR license, which allows you to search for articles within the university intranet at www.jstor.org.

There is also the possibility to apply for an online scholarship at www.e-fellows.de, which offers extensive options for researching (and downloading) important journal articles.

A useful tool for research is the Citation Maps (only usable at the university). The maps can be prepared by searching the 'ISI Web of Knowledge'. For this purpose, in the "Web of Knowledge" section, you search for an appropriate keyword and click on the respective article as a single view. Within the single view you will find the button for generating the "citation map". Here you can find out about 2 "generations" of articles to which the searched article refers in its references, and which articles refer to the one you are looking for in the following years. Thus, both the descent and the further use of a relevant article can be easily determined and used.

Interlibrary loan: You can make inter-library lending online on the website of the university library. Thus, books or articles from other universities in Germany are sent to the Koblenz location. For interlibrary loan you need a transaction number, which you can buy for 1.50 € at the circulation desk. Interlibrary loan can be made via the following page:

https://www.uni-koblenz-landau.de/de/bibliothek/suchenfinden/fernleihe-und-dokumentlieferung-1/digibib_login.

Please note, however, the time that may pass until the desired book or article is available.

5.2 Literature Selection for the Thesis

There is a certain value in scientific publications in science. The selection of sources is also an important criterion for the evaluation of the literature work in the thesis. For example, the "Arc Journal Ranking" or the "JOURQUAL3" ranking from the Association of Business School Professors is available for the selection of journals: <http://vhbonline.org/service/jourqual/vhb-jourqual-3/>.

For special articles that are considered to be particularly important, low-ranking journals can also be used. In addition, the selection and purposeful use of relevant sources and important authors reflects the quality of the literature work. The following ranking of the value of scientific publications should be considered:

1. English-language journal articles of high-level journals
2. German-language journal articles of high-ranking journals
3. Conference papers in which a 'double-blind' test is expressly stated (eg "Frontiers of Entrepreneurship Research")
4. University papers (dissertations, habilitations BUT NOT seminar, diploma, bachelor or master thesis)
5. Edited volumes
6. English textbooks
7. German textbooks
8. Internet sources (by the way, we consider Wikipedia (mostly) as not citable)

5.3 Journals

Journals, especially in English, are the most important source of scientific work.

Depending on the area, there are numerous (English-language) journals, with a wide variety of emphases and target groups. First of all, the generally important business-oriented journals are mentioned:

- Administrative Science Quarterly
- Management Science
- Academy of Management Journal
- Academy of Management Review
- Strategic Management Journal
- Organization Studies
- Journal of Management
- Journal of Management Studies

In the individual areas, the following journals are also important:

Innovation Management	Information Management	Entrepreneurship	Organization
Research Policy	Information Systems Research	Journal of Business Venturing	Organization Science
Journal of Business Venturing	Mathematical Programming	Entrepreneurship Theory and Practice	Journal of International Business Studies JIBS
Entrepreneurship: Theory and Practice	MIS Quarterly	Journal of Small Business Management JSBM	Journal of Labor Economics
Journal of Product Innovation Management	Proceedings of the International Conference on Information Systems (ICIS)	Strategic Entrepreneurship Journal	Journal of Applied Psychology
IEEE Transactions on Engineering Management	SIAM Journal on Computing (Society for Industrial and Applied Mathematics)	Small Business Economics	Journal of Economic Behavior and Organization
Journal of Small Business Management (JSBM)	Journal of Management Information Systems	Entrepreneurship and Regional Development	Organizational Behavior and Human Decision Processes
Strategic Entrepreneurship Journal	Information Systems Journal	Journal of Enterprising Culture	Journal of Law, Economics, and Organization
Technological Forecasting and Social Change	Journal of the Association for Information Systems (JAIS)	Journal of International Entrepreneurship	Research in the Sociology of Organizations

Table 2: Summary of the Journals (own representation)

Further requirements and procedures with questions about the literature can be clarified in a one-to-one meeting with the respective supervisor of the work.

6 Conducting Research

6.1 General Information about the Choice of Research Methods

The final work will generally address the identified research gap(s) and research questions, generate insights, and provide answers. For this, you should use the research methods you have learned in your studies or learn and deepen new methods.

Choosing an appropriate research method depends on different factors:

- State of knowledge of the research
- Type of question
- Availability of data (survey/interviews)

The choice of research method needs to be selected with the supervisor of the work.

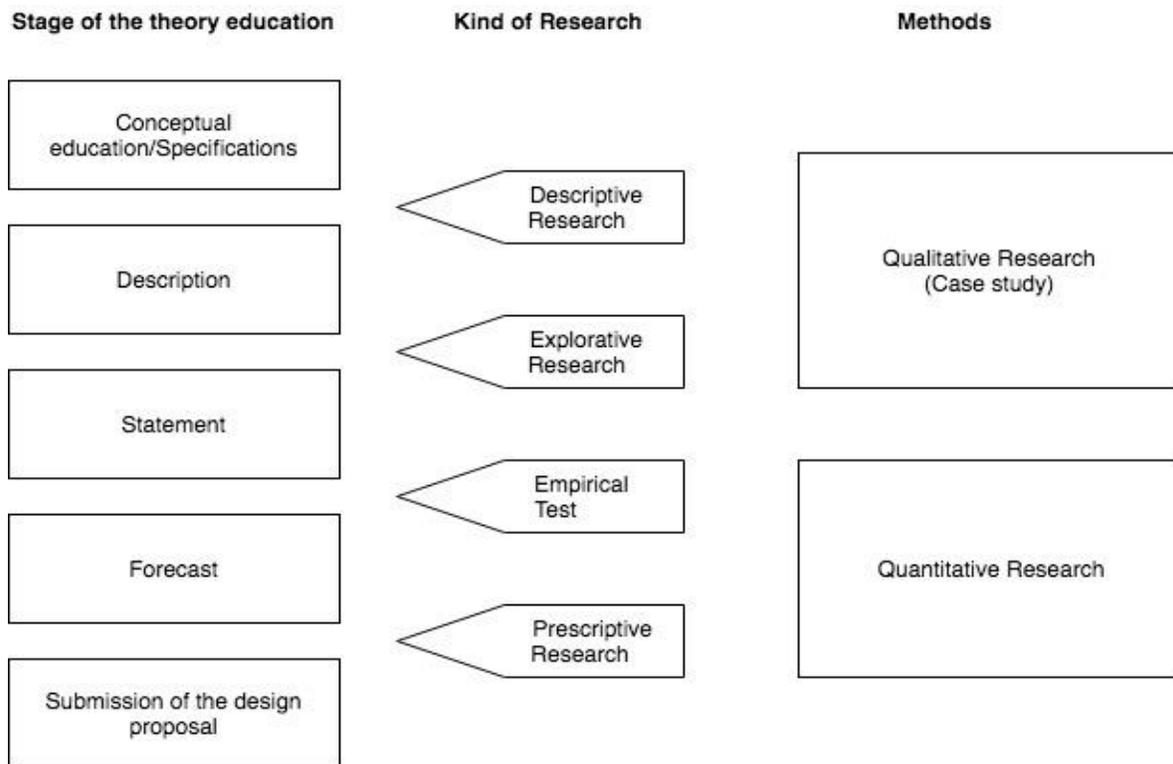


Figure 2: Stage of the Theory education, kind of research, and Methods (own representation based on Riesenhuber, 2007,6)

6.2 Qualitative Oriented Research

Qualitative work is especially relevant in areas where there is little knowledge about an area. It supports the definition, description and / or explanation of theories (see Figure 2).

6.3 Quantitative Oriented Research

Frequently used methods of data analysis and evaluation are qualitative procedures (case study and content analysis), experiments as well as scale development and scale validation (classical questionnaires on paper or online).

Technical aids are available through the data center PASW (SPSS) and AMOS, as well as through the working group Maxqda for content analysis. Online queries can be created and hosted using the 'Limesurvey' tool.

Survey

- Every survey should have a subject which should be filled in with participation in experiments or interviews etc. Especially in case of online surveys, it is advisable to post the reference to the survey (including a link) in thematically appropriate online forums. There is a community for every theme, just google 'theme online forum'. Posting surveys on thematically appropriate groups in Facebook can get you good response.
- Attention: Sometimes the forum users and the moderators treat their forum sacred, and advertising is frowned upon. So, do not be too ludicrous and do not hide the scientific purpose of the survey. For posting the survey, read the conditions of the use beforehand. If in doubt, please ask the website operator or moderator beforehand if you are allowed to publish your request.
- Incentives e.g. small lottery can do wonders for the response. The awards do not have to be expensive. It is often better to use the award to create a smart, charming connection to the survey topic.
- Furthermore associations/societies can be relevant.

- Finally, in addition to the mailing lists and forums/newsgroups of your own university, you can also inquire other universities if they can add your survey to their forum or send it via their mailing list. Many do not agree, but some do.

7 Requirements for the Language and the Form of the Research

7.1 Language Requirements

7.1.1 Fundamentals

Any research can be written in English or German.

The work should be flawless in terms of spelling, grammar, and punctuation and should correspond to the current edition of 'Duden' (Theisen, 2006, p. 136).

Sentences that are longer than three lines and have multiple inter nesting must be avoided.

Foreign words and abbreviations are most likely to be avoided and used wisely.

Colloquialisms do not bear witness to objectivity and must be avoided (Theisen, 2006, p. 134).

If abbreviations are an integral part of the jargon (for example, 'VC' for 'Venture Capital'), it should be always announced at the first mention and the abbreviation in the bracket, ie:

“...the market of venture capital (VC) investment has been in the...”

The addresses of the research are informed and interested experts. Here you must think carefully, which contents you can presuppose and which not. Basically, the text should be formulated so that it could also be published in a journal or as a scientific publication. Take special care that you do not formulate your work as text for students. Here the targeted consultation with the service helps towards the end of the work.

7.1.2 Procedure

From experience, the following procedure has been established:

Start the writing process as early as possible.

Here statements may also appear several times and in different places. During the **Revisions (several times)** sculpt the statements to stringent, successive logical structures. You make sure that statements **concise** and are effective.

Supportive statements that are important to the reader but subordinate to the research goal are turned into **speaking footnotes**.

7.2 Requirements for the Form

7.2.1 Outline of the Work

The structure is the **essential basis** of the work and shows how the topic was understood and worked on.

In addition to the structure with corresponding page information, the **Table of Contents** also contains references to literature, illustrations, tables, abbreviations and appendix (with page details).

The **Table of Contents** is a very central milestone in the preparation of a final thesis. Once you have read the literature and have an overview of the topic, make the directory.

It is important that the **Table of Contents** is structured and purposeful.

In iterative steps, together with the supervision, you will always evolve the **table of contents** until it is decided that the table of contents has an appropriate form for the work:

- The work is logical
- The topic has been divided into functional sub-aspects
- The weighting of the sub-aspects was chosen as appropriate

The **depth of the structure** depends on the type and length of the work. Overall, the structure should be balanced. I.e.,

- that with subdivision a sub item 2.1 also follows a sub item 2.2,
- that sub items are not a literal repetition of the parent point, and
- that positions that are in the same level in the outline are the same in content

Abbreviations that do not appear in the dictionary must be explained in the **List of Abbreviations**. Abbreviations for the sake of convenience (such as "Mark.Seg." For "market segments") are not permitted.

If the work contains illustrations and / or tables, a **List of Figure and / or Table** must be created.

Material, such as extensive calculations of statistical analysis methods, can be reproduced in an **Appendix** of the paper. The appendix should be introduced by an **Annex List**.

The following outline has proven successful:

1. Introduction (problem statement, research question (s), if necessary delineation of the object of investigation, objectives and procedure of the investigation). The introduction has a high significance. It should not be created until the end of the processing period, but rather early:
 - 1.1. The problem statement explains why it is interesting from the point of view of science and practice to investigate the raised issue. It makes sense to give numbers here too (for example, the evolution of start-up dynamics in Europe over the past 10 years). In view of its relevance to science, existing research gaps should already be mentioned briefly in the introduction, which are close (at least partially) with your own work.
 - 1.2. The named research gap (s) will be picked up and the goals of the own work would be explicitly named (and numbered!). It must become clear what contribution is made to fill the research gaps. It can also be called descriptive research goals (for example, identifying the relevance of coaching for founder teams). The section on the course of the investigation serves to the reader the course of the argumentation (the red thread) to clarify (when, what is explained, in order to reach which research goal?)
 - Note: The research goals are taken up again in the conclusions at the end of the thesis and finally discussed.
2. Fundamentals (theoretical fundamentals, presentation of theories and definitions as well as developments in literature / research)
3. The Frame of Reference (Model part)¹: Depending on whether you are working qualitatively or quantitatively, the relevant research methods will be applied here

¹ A frame of reference is used to guide the conceptual investigation on the basis of an existing conceptual structure of a research object. The frame of reference is at the same time the graphical representation of the grid, on the basis of which further explanations are systematized and concretized. In an empirical study, only a (sub) model is modeled, which only depicts a section of the frame of reference.

- Qualitative: Which theories (which aspects of selected theories) are relevant to the following study? How do they relate to each other? Which connections can be assumed? What can these contribute to explanatory statements?
 - Quantitative: Which quantities are examined, in which context are these mutually related? Graphic rendering of the model or concept! Important is the theoretical foundation on the basis of Chapter 2: Are there superior theories that support this modeling? For example, Theories of foundational research such as effectuation or the theory of the "lead entrepreneur", etc. In this part also usually the so-called "conceptualization" of the constructs, which are (possibly) investigated empirically.
4. (Empirical) investigation (for example in empirical work method of the investigation, procedure in the operationalization of the constructs, methods of data analysis and quality criteria, hypothesis generation, evaluation)
 5. Conclusion (implications for research and practice)

Abstract: After completing the writing of the thesis, prepare a **German (Zusammenfassung) and an English abstract (abstract)**. The summaries each include a DIN A4 page in the format of the work. The content of the abstract is divided into three paragraphs as follows:

- Topic: The topic, the research question (s) and working hypotheses are presented.
- Methodology: The method used, and the reasoning of the thesis are presented.
- Results: The results of the work are presented.

7.2.2 Paper and Page Format

Paper: It should be only one sided written **DIN A4** pages with max 100g/m²

Font: The text is to be written in 12-point font and set in justified, headings can be highlighted by larger font sizes up to 16-point. The font Times New Roman / Calibri must be used for all texts, tables, directories, etc. (font in consultation with the respective support). Use manual hyphenation. Chapter and section headings can be written in Arial font.

Line spacing: The text is to be written at 1.5-line spacing, headings can be emphasized by larger distances.

Border Width: The upper edge is 2.5 cm, the lower 2 cm. On the right side, a correction margin of 3 cm should be left free, the left side should be 3 cm too.

As far as possible, formatting should never be done "by hand", but always via the selection of formatting (for example, standard, bullets, ...).

7.2.3 Quotes

The use of third-party intellectual property must be clearly identified. This applies to both **the literal quote as well as a meaningful paraphrasing**.

The referencing should be carried out by the so-called **Harvard system**, i.e. by naming the author within the text in brackets ().

Always name the author, the year of publication of the source and the page number (s) from where the statement was taken. So: (von Kortzfleisch et al. 2011, pp. 15-16; von Kortzfleisch 2010, p.137).

Multiple sources should be sorted (alphabetically or chronologically, with chronological ordering preferred - with the current sources named first).

The citation with footnotes is not allowed! Footnotes are for the sole purpose of recording marginal notes.

The inclusion of the **speaking footnotes** demonstrates understanding of proper and goal-oriented writing of a scientific paper.

Direct quotes (literal citations) must be avoided. If it is a definition that you believe must be reproduced verbatim, put it in quotation marks. Changes to the source text are to be identified. Omissions must be indicated by three bracketed dots.

If **more than one same year's publication by the same author** is cited in a paper, the publications must be clearly identified by alphabetic extension, e.g.

- (von Kortzfleisch 2002a, p. 213)
- (von Kortzfleisch 2002b, p. 17)

All **tables and figures** should be self-made (do not use copied / scanned images), unless they are photographs.

Below the tables and figures, label them with: "Source: the figure is modified with: “, "Source: own representation based on ..."). If the representation is completely self-created,

it is marked with "own representation". When using tables and illustrations, always make sure that the text refers to them.

Own tables and figures must be marked as such: "Source: own representation".

7.2.4 References and Bibliography

Literature will be listed in a directory at the end of the thesis.

Similar sources (interviews, websites) are mentioned in a separate list of sources.

References must be sorted alphabetically and made with particular care.

Example:

Monograph

Theisen, M. R. (2006). *Wissenschaftliches Arbeiten*. 13. Edition, München: Vahlen-Verlag.

Essay from an Anthology

Riesenhuber, F. (2007). *Großzahlige empirische Forschung*. In: Albers, S.; Klapper, D.; Konradt, U.; Walter, A.; Wolf, J. (Hrsg.): *Methodik der empirischen Forschung*. 2. Edition, Wiesbaden: Gabler-Verlag, 1-16.

Magazine Article

Ensley, M. D.; Pearson, A. W.; Amason, A. C. (2002). *Understanding the dynamics of new venture top management teams cohesion, conflict, and new venture performance*. *Journal of Business Venturing*, 17 (4), 365-386.

Frances, D.H.; Sandberg, W.R. (2000). *Friendship within entrepreneurial teams and its association with team and venture performance*. *Entrepreneurship Theory and Practice*, 25 (2), 5-26.

Conference Contribution

Von Kortzfleisch, H.; Mokanis, I.; Bernasconi, M.; Magin, P. (2010). *Entrepreneurial design thinking - a new methodology for scientific entrepreneurship*. Conference contribution,

presented at the 14th Interdisciplinary Annual Conference on Foundational Research (G-Forum), 21.-22.10.2010, Cologne.

Internet

OECD / The European Commission (2014). *The Missing Entrepreneurs: Policies for Inclusive Entrepreneurship in Europe*, OECD Publishing.

<http://dx.doi.org/10.1787/9789264213593-en>, last accessed: 11.07.2016.

8 Technical Notes on Registration and Submission of Bachelor and Master Theses

Important information on the registration and deregistration of theses in Department 4: Computer Science can be found here:

<https://www.uni-koblenz-landau.de/de/koblenz/fb4/studierende/pruefungswesen/Abschlussarbeiten>.

You will also find templates there (Title page, etc.) and notes about format specifications, extension, explanation and blocking notice.

The work has to be registered and submitted to the examination office in the correct form (cover sheet etc.). Before submitting your work, please inform yourself independently on the websites of the examination office about the current requirements (see <https://www.uni-koblenz-landau.de/de/uni/organisation/verwaltung/abteilungen/abt-3/hsp-ko/pruefungsamtservice>). Please also check before handing in whether you have prefaced the work with a German and an English abstract (see chapter 7.2.1).

Three copies of the work have to be handed in. It is important to note the preferences of the care (hardcover with / without labeling and binding).

The work and a possibly collected dataset are also to be submitted in digital form (ie as a PDF document and / or SPSS file or compatible) by email or by means of a data carrier during the supervision of the work.