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GUIDELINE FOR THE CREATION OF SEMINARS, PROJECTS, PRACTICAL COURSES AND FINAL THESIS ON THE CHAIR FOR BUSINESS ADMINISTRATION, ESP. BUSINESS INFORMATICS IN THE SERVICE SECTOR (STATE 10/2020)

1. Procedure for the application and registration of final theses

Topics for theses are published on the website of the chair. If the student is interested in a topic, he/she fills out the form, which is linked accordingly[1]. Here the following information is requested:

- Name
- Course of study
- Topic, which the student wants to work on
- Type of thesis (Bachelor, Master)
- Desired drawing date
- Unadjusted transcript of records

The application for the topic should be received via the form **at least 4 weeks before the closing date for the desired drawing date** (see Figure 1). Later applications cannot be considered. After evaluation of the application by the chair, the student will receive positive or negative feedback based on the following facts after 2 weeks at the latest:

- Deadline for the draw was met
- Student profile meets the requirements of the topic
- Capacities for the supervision of the final thesis at the chair are available

If the feedback is positive, the student can register his or her thesis at the examination office. Subsequently, he will receive a date proposal for a subject area consultation.

[1] http://iss.uni-saarland.de/de/teaching/topics/

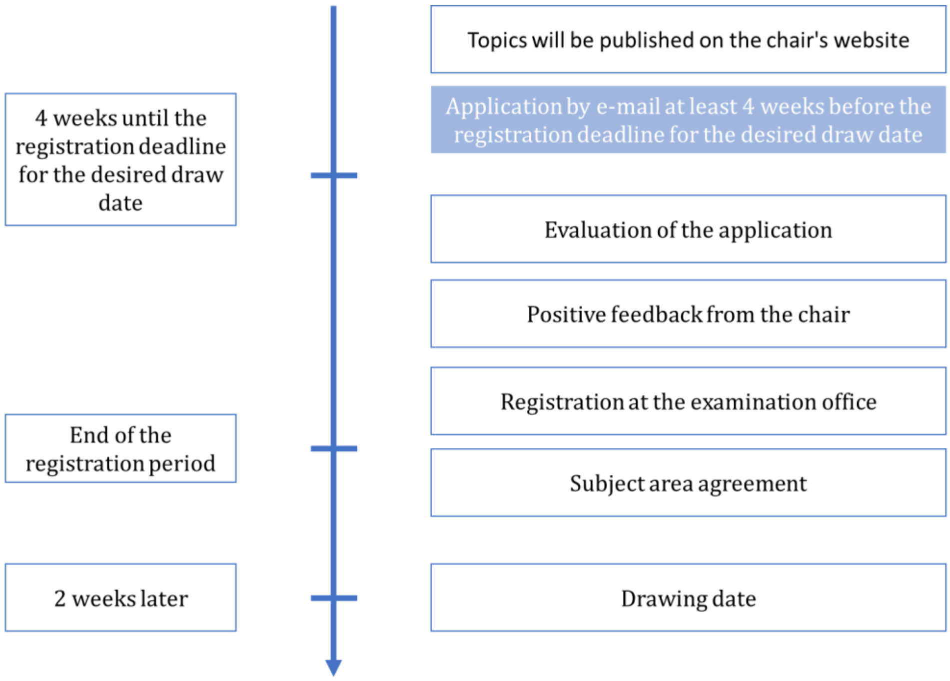

Figure 1: Procedure for final theses

The main contact person during the processing of the thesis is the supervising assistant. The student is responsible for communication during the processing of the thesis. Should the student not be able to successfully develop his work despite intensive efforts, it is the student's responsibility to actively contact the supervisor.

2. General notes

This guideline is intended to support you in writing seminar papers, projects, internships, bachelor and master theses at the Chair of Business Administration, especially business informatics in the service sector and to familiarize you with the requirements of scientific work at the Chair. Topics for project, internship, bachelor and master theses are continuously published on the website of the chair.[2]

In the following you will find information on the general procedure, the content and formal design of your work, citation, literature and organizational aspects. Chapter 3 (Procedure) only applies to final theses, i.e. Bachelor and Master theses, while the remaining chapters on content, citation, etc. also apply to seminar papers, projects and internships.

Project and internship theses document the results of the project work or internship, represent the process of gaining knowledge and define open research questions.

Final papers and seminar papers deal with a clearly defined topic, from which concrete research questions are derived, which the paper investigates. Each final paper or seminar paper builds on existing knowledge, identifies a need for research and, based on this, addresses a new topic. The problems or research questions must be relevant and the answers to them must either have a well-founded theoretical-conceptual or practical benefit.

The goal of a bachelor or master thesis is to prove that one can independently and scientifically familiarize oneself with a topic, work out new solutions to defined problems and prove or disprove their usefulness.

The grade for the final thesis is composed of:

[2] http://iss.uni-saarland.de/de/teaching/topics/

- Interim presentation
- Final thesis

Both parts are graded and go into the final score in the same proportion.

3. Procedure for final thesis (Old: until drawing date 07/2020)

In the following, six phases are presented according to which a final thesis should be developed at the chair (cf. figure 2). The percentages of the time required for the individual phases are not to be understood as a mandatory specification, but only as guidelines. Each phase also includes time for writing down the results.

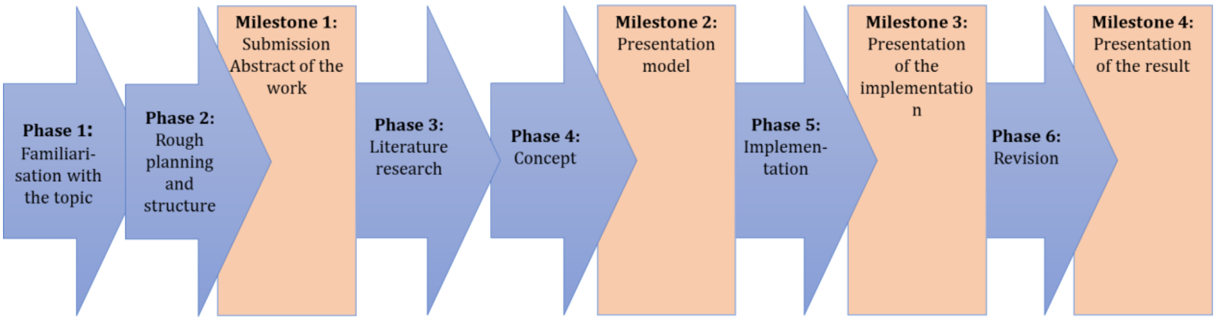

Figure 2: Phases and milestones for final papers

3.1. Phase 1 – Initial Training

Phase 1 comprises the familiarisation with the topic including an initial literature search and analysis of the application environment. This phase should account for about **5%** of the processing time.

3.2. Phase 2 – Rough planning and structure

In the second phase, a brief description of the topic (abstract) is drawn up with rough planning of the procedure and an initial outline. The volume should not exceed 2 DIN A4 pages. The abstract contains the following points:

- Title oft he final thesis

1) Introduction: What is the (general) theme of the work? Which topic area is addressed?
2) Problem: Which research question is addressed?
3) Background: Why has this research question not been adequately addressed so far? What work is already being done in this context?
4) Approach: What is the new idea to answer the defined research question? What is the new perspective?
5) Procedure: Which research methodology was chosen? Experiments, implementation of a software, carrying out case studies?
6) Impact: What follows from the results of the work? What implications can be deduced?

- Structure

The completion of phase 2 is **milestone 1 (submission of the abstract of the work)**. The abstract must be sent by e-mail to the supervising assistant. Phase 2 should account for approx**. 10%** of the processing time.

3.3. Phase 3 – Literature research

In phase 3 the literature part of the work is prepared (state of the art). The research of relevant literature on the topic should answer the following questions:

- What scientific approaches already exist in the context of the topic?
- Has the research question already been answered?
- Can the existing scientific approaches be used in the context of the topic of the final paper?
- If not, why not? Where are there still gaps?

Phase 3 should account for about **15%** of the processing time.

3.4. Phase 4 – Conception

Based on the findings of the literature search, the model for answering the defined research question is designed in phase 4. Depending on the topic, this may also represent the design and preparation of an empirical study. A technical topic in this phase includes the conception of a model, which is later instantiated by a proto-type. Phase 4 should account for about **30%** of the processing time.
In the middle of the conception phase, the student presents his developed concept to the supervising assistant (and possibly Prof. Maaß) in order to get feedback for further work on the topic. In the 10 to max. 15-minute presentation, the student should briefly introduce the topic again and explain the motivation and the goal. Afterwards the chosen approach, first ideas or results are presented. Finally, questions or problems that exist and the next steps should be discussed. The presentation corresponds to **milestone 2 (presentation of the model)**. It is up to the student to arrange a date for this meeting with the supervising assistant.

3.5.Phase 5 – Realisation

Phase 5 includes the instantiation of the developed model, i.e. the realisation of a first prototype or the execution of an empirical study with initial evaluation. The student presents his implementation to the supervising assistant to get feedback for the revision. This corresponds to **milestone 3 (presentation of the implementation)**. It is the student's task to arrange a date for this meeting with the supervising assistant. Phase 5 should take about **30%** of the time.

3.6.Phase 6 – Revision

In the final phase, the instantiation of the developed model should be revised according to the feedback of the supervising assistant, i.e. the prototype should be revised or a further evaluation of the study should be carried out. Developed prototypes should be integrated into the infrastructure of the chair, depending on the topic. Finally, the student prepares a final presentation, which includes the following points:

- Motivation of the thesis
- Professional background with main points of literature analysis
- Aim of the thesis
- Approach
- Procedure

- Results (Demo etc.)

The presentation is to be sent by e-mail to the supervising assistant, who will decide whether the student is invited to the presentation. If this is the case, the student will present his work to the chair team. This corresponds to **milestone 4 (presentation of the final result)**. Phase 6 should take about **10%** of the time needed for the work.

4. Procedure for thesis (New: from drawing date 08/2020)

In the following, 5 phases are presented according to which a final thesis should be developed at the chair (cf. figure 2).

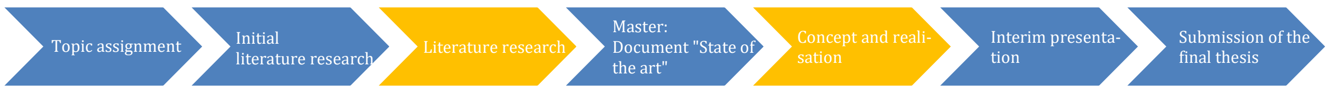

Figure 3: Phases in the final thesis

After agreeing on the topic with the supervisor, the student is given the relevant websites for literature research and roughly defined what the first useful search terms are. The student uses this information to derive further search terms and begins his/her research. The aim is to identify the most relevant academic publications for their own work.

4.1. Initial Literature research

A list of related works will be sent to the supervisor so that he/she can check the general quality of the identified literature and give further advice if necessary. This list should include at least ten relevant scientific publications. In addition to their title and authors, each publication should be presented with a short summary (2-3 sentences) and the relevance of the publication to the thesis (2-3 sentences; the aim is to highlight what you have learned for your own work through reading, e.g. what you would like to adopt methodically). The purpose of this list is to enable the supervisor to make sure that the student has identified the most relevant papers. The student will receive feedback on this list from his/her supervisor and a deadline will be set for the first submission of the actual written summary.

Date

- **Bachelor: End Week 2**
- **Master: End Week 2**

4.2. Document "State of the art in research" (Master only)

By the set deadline, the Master's student must take into account the feedback given by his or her supervisor on the literature list (i.e. search for new literature if necessary) and prepare an initial summary of the publications. This should be in the style of the "Related Work" chapter of our final papers (see the ones provided on the website). The summary should not only reflect what is described in the papers, but also relate it to your own work. It should be noted that, as a rule, more papers need to be read, understood and described in order to make the "Related Work" chapter of the Bachelor's or Master's thesis of high quality; however, the summary serves as a good basis for this chapter.

Termin

- **Bachelor: Deleted**
- **Master: End Week 8**

4.3. Interim presentation

After the practical part of the thesis (empirical study, literature research, service development) an interim presentation is mandatory.

1. After completion of the thesis, but before writing it down, the interim presentation must be held. This will be graded and will be included in the grade of the Bachelor's or Master's thesis. The presentation shall cover the following aspects:
    - Short motivation
    - Short overview of related works
    - Results
        - Conception
        - Implementation / Method
        - Results
    - [optional] Live demo or video
    - Discussion of the results
    - Potential future points of contact ("Future Work")
2. presentation time:
    - **Bachelor**: 20 minutes [followed by a question and answer session].
    - **Master**: 30 minutes [followed by a question and answer session]
    - Language: German / English
3. The supervisor coordinates the appointment with the secretariat of the Maaß Chair. Ideally, the second reviewer or his or her secretary's office will also be involved in the appointment process. The student sends an e-mail with the following format to his/her supervisor:

    Title/Title: [Add the title of the thesis]
    Type of lecture/type of talk: [Bachelor/Master Defense Talk]
    Speaker: [Add your name].
    Language: [Will you give the Talk in German or English].
    Time and Date/Time and Date: [Add the time and date].
    Room of the lecture/room: [add the location where the talk will be given].
    Short summary/abstract: [provide a short abstract of the talk].

Date
- Bachelor: End of week 8
- Master: End of month 5

4.4. Submission of the final thesis

1. the ISS template must be used for the final thesis (link)
2. scope of the thesis:
    - **Bachelor**: 25-35 pages (excluding title page, second page and table of contents, but including bibliography)
    - **Master**: 50-60 pages (excluding title page, second page and table of contents, but including bibliography)
3. in addition to the bound copies, the final thesis must be sent to the supervisor by e-mail after completion.

Date
- Bachelor: End of week 10
- Master: End of month 6 (approx. 24 weeks)

5. Content design

The exact subject matter and the delimitation of the content of the work must be continuously observed. Meetings with the supervising assistant should be used to clarify open questions. The structure of the work should be meaningful and show a "red thread". Repetitions and contradictory sequences must be avoided.
A clear and concise sentence structure makes it easier for the reader to understand. Long, complicated sentences should be avoided as well as unnecessary foreign words, such as "management" instead of "corporate management". Standing scientific terms remain untranslated, such as "Big Data".
The style of language must be appropriate to a scientific paper. Colloquial formulations are to be avoided, as are personal formulations. This includes the use of "I". This should be replaced by passive idioms or "the author". The language of the work is English or German.

5.1. Structure

The basic structure of theses consists of the following elements:

1) Cover page
2) Table of contents
3) List of abbreviations, if applicable
4) List of figures, if applicable
5) List of tables, if applicable
6) List of annexes, if applicable
7) --- *Text editing* ---
8) Bibliography
9) Annex, if applicable
10) Declaration on oath

The cover sheet corresponds to the template provided by the Examination Office.

5.2. List of abbreviations

If abbreviations are used, they must be listed in a list of abbreviations (e.g. ERP for Enterprise Resource Planning). Commonly used abbreviations should not be mentioned.

5.3. List of figures and tables

Tables and figures in the text must be numbered consecutively and listed in two separate lists. These lists of figures and tables are inserted before the textual part.

5.4. Annex list

All annexes of the paper are numbered and listed in the annex list.

5.5.Text editing

The text development part of the work consists of an introduction, main part and final part.

In the **introduction** the reader is introduced to the topic of the work. The initial situation and the relevance of the topic for research and practice are explained. The work should start with the objective and an explanation of the structure and define and delimit central terms of the topic. The introductory chapter may have a more creative and meaningful name than "Introduction" or "Introduction".

The **main part** consists of a literature chapter and the conception and implementation chapters. The volume of the literature chapter should be about one third of the work. In it the current state of research is presented and the research questions for the work are derived. In the conception and implementation part the investigation of the research questions is presented.

In the **concluding part**, the results of the work are summarised and their significance for research and practice is presented. Furthermore, the work is delimited in order to show which aspects have not been considered in the present paper. Finally, an outlook is given.

Between the individual chapters, there are transitions which link the chapters with each other and create the "red thread" of the work.

5.6. Annex
Relevant documents must be listed in the annex, but they are too extensive to be included in the text preparation section. These include code examples or questionnaires from empirical studies

5.7. Bibliography
The bibliography lists without exception all sources used and referenced in the work.

5.8. Affidavit
The work must be accompanied by an affidavit. This statement shall prove the renunciation of non-specified aids and the independent performance. It must be dated and signed and must contain the following wording:
"I affirm that I produced the work independently, did not use any aids other than those indicated and clearly marked all borrowings, whether verbatim or analogous, as such.

6. Formal design
The work is written in font size 12 (Times New Roman) and font size 9 in the footnotes. The line spacing is 1.5 in the main text and 1.0 in the footnotes. The page margin is 2 cm on the right-hand side, 3 cm on the left-hand side and 3 cm at the top and bottom. It is optional to create the work with Word or Latex. Final theses and project and internship work should have the following page count:

- Internship thesis: 10-20 pages (complete elaboration)
- Project work: 10-20 pages (complete elaboration)
- Bachelor Thesis:
  - old **until drawing date 07/2020**: 50-70 pages (complete thesis) (+/-10%)
  - new **as of drawing date 08/2020**: 25-35 pages (excluding title page, second page and table of contents, but including bibliography) (+/-10%)
- Master Thesis:
  - old **until drawing date 07/2020**: 70-90 pages (complete thesis) (+/- 10%)
  - new **as of drawing date 08/2020**: 50-60 pages (excluding title page, second page and table of contents, but including bibliography) (+/-10%)

7. Citation reference
Foreign ideas must be quoted. A distinction must be made between literal and analogous quotations. In the case of literal quotations, sentences are taken over from the author to the letter and

character. This is indicated by inverted commas. In the case of analogous quotations, only the author's thoughts are quoted. In the text, the citation is made with a short document. After the main text, all cited literature is listed in the bibliography. If there is no literal quotation, but an analogous quotation, a "Cf." is added before the author's name.

- *Reference: (name (year), page)*
- *Example: (Mustermann (2011), S. 10)*

The structure of the entries in the bibliography must be alphabetical. Attention must be paid to their completeness. We recommend using a literature management programme such as Citavi or JabRef. If publications by the same author from one year are used, this should be marked with the suffix "a", "b" etc.

- *Example: (Mustermann (2011a), S. 10)*

If an author is unknown, this must be indicated with "o.V.". If an Internet source is given, the date of the page's access should be given in square brackets in addition to the URL. A book is listed in the bibliography by stating Na-me, first letter of the first name, year of publication in brackets, title (italics), edition, publisher. In the case of journals, the list of references is as follows: Name, first letter of the first name, year of publication in brackets, title ('in inverted commas'), periodical (italics), volume (bold), number (in brackets), page numbers.

Examples:
- Books: Hamel, G. & Prahalad, C. (1994), *Competing for the Future*, 2. Edition., Harvard Business Press.
- Journals: Brockhoff, K. (2008), 'Produktinnovation und internes Unternehmenswachstum', *Zeitschrift für Betriebswirtschaft* **78**(2), 225-245.
- Entries in collective works: Bullinger, H.-J. & Renz, K.-C. (2011), Forschungs- und Entwicklungsstrategien, *in* Albers, S. & Gassmann, O., Hrsg., 'Handbuch Technologie- und Innovationsmanagement', Gabler Verlag.
- Internet articles: Wiehr, H. (2009), 'Grün durch IT bringt viel mehr als Grün in der IT', *CIO*, 20.04.2009, http://www.cio.de/news/cionachrichten/881769/, [07.05.2012].

In the case of tables and figures that have been taken over, the source must be indicated directly below by means of "Source: Author (year), page". If tables or figures have been created or modified based on a source itself, this must be indicated with "Source: following author (year), page". In this context we recommend the book "Wissenschaftliches Arbeiten: Technik - Methodik - Form" by Theisen, published by Vahlen-Verlag or „Writing scientific english" by Skern, published by UTB.

7.1. Citation etiquette

Below you will find an overview of the most important rules for dealing with third party intellectual property[3]. It is part of the writing of scientific texts that thought processes, methods and theories adopted by third parties are clearly identified as borrowed ideas.

[3] Adaptation of the "Instruction Sheet for Dealing with Plagiarism" of the Teaching Commission of the University of Zurich, adopted on 30 April 2007

Basic rules

Shorter passages of a foreign work may be quoted. This requires, however, that the citation is marked and the source is stated.

1) Citation of sources: Please cite all sources used completely and comprehensibly so that an outsider can check them. For this purpose, use the common scientific citation rules of your subject as well as the special regulations for citing electronic sources.

2) Own work: Make a clear distinction between own and external work. In the case of external services, name the author. This applies equally to texts, computer codes, tables, graphics and data, even if they come from the World Wide Web.

3) Literal quotations: Put verbatim text (including parts of sentences or terms), in quotation marks and in the closing words.

4) Meaningful quotations (paraphrase): For literary passages that you have put into your own words or that you have reproduced as a summary, put the source in brackets.

5) Secondary sources: Mark a citation as secondary source if you have taken it from another author without checking the original source.

6) Bibliography: At the end of your work, list all sources used and 'thank you' godparents of your work alphabetically.

7) General knowledge: What may be assumed to be general knowledge (basic knowledge) does not have to be accompanied by a reference. However, if the basic knowledge is taken over by other authors (e.g. from a textbook), the source must be named.

What counts as plagiarism?

A plagiarism is the complete or partial takeover of a foreign work without indication of the source and the author. This is not permitted:

1) the literal or analogous takeover of intellectual property (text passages, thoughts, structure, ...) of another person without clearly identifying the source.

2) The use of text passages from the Internet without stating the www address and date of access.

3) The use of your own written works or parts thereof in several student projects or performance assessments without explicit identification.

4) the translation of foreign-language texts or parts of texts without indication of the source

5) Submitting a work under your name that was written by someone else ("ghostwriting")

6) The adoption of text parts from an external work, paraphrased if necessary and with indication of the source used, but not in the context of the adopted text part (example: hiding the plagiarised sources in a footnote at the end of the work).

Citation Check

a) Are you familiar with the citation standards of the subject area? (If you are unsure, ask your supervisor at an early stage)

b) Verbatim quotes in inverted commas and naming the author (with page reference)?

c) Mention all authors of cited, paraphrased or borrowed ideas?

d) Third-party intellectual property clearly separated from own work and identified?

e) Are all sources used listed alphabetically in the bibliography?

f) Are sources from the Internet listed?

g) Have primary sources been given preference over secondary sources?

h) Are formal criteria respected?

i) Have tables/figures/images been marked with the source?

j) Declaration of independence signed and enclosed?

If you can answer all 10 questions in the affirmative, your written work should stand up to any electronic plagiarism test and you can submit your work with a clear conscience.

8. Literature

The work is mainly based on scientific journals as well as textbooks and reference books. These are available in the libraries of the university and via the electronic periodicals library (e.g. Ebsco) as well as via inter-library loan if necessary. Primarily suitable literature of the ISS - Chair is to be referred to. Care must be taken to ensure that the current editions of the books are used and that books are used which meet the requirements of scientific work. Rankings for scientific journals are, for example, the "VHB-JOURQUAL" ranking of the Association of University Professors and Lecturers in Business Administration or the Handelsblatt ranking for business administration journals.

9. Organisational details

9.1. Submission of theses

Final papers must be submitted in the following form:

- Two copies printed on one side and bound (to be submitted to the Examination Office)

- Electronic copy (PDF and OpenOffice / MS-Word / LaTeX file) by e-mail to the supervising assistant
- Signed consent that the work may be checked by online plagiarism software

When conducting an empirical study as part of the work:

- Transfer of all data sets, video and audio recordings and questionnaires to assistants in digital and processable form (e.g. CSV, XLS, SPSS, R, Smart-PLS)

9.2. Submission of project and intership work

Project and internship papers must be submitted in the following form:

- A printed and bound copy
- Electronic copy (PDF and OpenOffice / MS-Word / LaTeX file) by e-mail to the assistant in charge
- Signed consent that the work may be checked by online plagiarism software

When conducting an empirical study as part of the work:

- Transfer of all data sets, video and audio recordings and questionnaires to assistants in digital and processable form (e.g. CSV, XLS, SPSS, R, Smart-PLS)