University of Applied Sci

HOCHSCHU
EMDEN·LE

FB Technik, Maschinenbau
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Requirements and Information for Project and Thesis Work

A Guideline

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1 Preface

This document provides information on guidelines and requirements for writing project reports and final theses under the supervision of Prof. Dr.-Ing. Agnes Pechmann and/or members of her research team.

The guidelines and requirements presented here do not claim to be complete. In general, this basic principle is valid:

"In case of uncertainty, asking questions is the best solution for getting help!"

Each student is responsible for asking necessary questions and to organize appointments him/herself.

Before any kind of project can be started or supervised, a brief exposé must be handed in and accepted by the supervisor (see further details in section 4).

2   Formal requirements

Before the project, and hence the work, can start, some formal requirements should be defined to simplify daily business.

2.1   Appointments/Meetings

It is mandatory to schedule/organize appointments and other deadlines early enough. If not discussed, it is expected that the student will schedule weekly appointments to discuss questions and approaches regarding the work. For projects done in companies, the number of appointments must be agreed with the supervisor.

Once a week, the student must send a status update regarding the work status by e-mail (preferably on Friday). The status report should contain an:

- informal summary of the work done;
- deviations from the planned work/schedule; and
- other relevant news/issues for their supervisors.

The purpose is to get a quick overview of the work status. The e-mail must be sent to all supervisors and all other people involved should be included by carbon copy (cc.). Length of the status update: ½ page.

A template can be downloaded from the following website:

http://www.hs-emden-leer.de/fachbereiche/technik/labore/produktionsplanung.html

2.2   Meeting minutes

After meetings, students must send a short summary of the content, deadlines and agreements to the professor and other involved supervisors.

The minutes of the meeting can be written as an e-mail or as a formal extra document attached to the e-mail. The minutes are due the day after meeting takes place.

The aim of the meeting minutes is to provide a consistent understanding for all parties of the discussed points. A template can be downloaded from the following website:

http://www.hs-emden-leer.de/fachbereiche/technik/labore/produktionsplanung.html

3   Requirements for reports

The following chapter gives an overview of requirements on structure, format and contents of the report.

3.1   Structure of the report

Documents or drafts should contain the following information/points:

- Front page (with Name of the author Matriculation number; Official submission date and a version number/date; Type of document and lecture)
- Declaration of authorship (if applicable)
- Confidentiality clause (if applicable)
- Summary/Abstract
- Table of contents
- List of figures (if applicable)
- List of tables (if applicable)
- List of formulas (if applicable)
- Abbreviations and Symbols
- 1. Introduction
    - o   1.1 Motivation (subtitles not always necessary)
    - o   1.2 Objective
    - o   1.3 Approach to task
    - o   1.4 Structure of the report
- 2. Background information; Basic principles
- 3. Content
- ….
- X. Results
- X. Conclusion and Outlook
- X. References
- Annex

In general, it is recommended to use automated functions of Microsoft WORD or Latex. The PDF- version must be unlocked; links should be usable.

3.2   Formatting requirements for reports

The following requirements are a good standard for documents. A template in the corporate design of the university can be downloaded from the following Website:

http://www.hs-emden-leer.de/fachbereiche/technik/labore/produktionsplanung.html

3.2.1   Margins
- Top: 2,0 cm
- Bottom: 2,0 cm
- Left: 2,5 cm
- Right: 3,5 cm

3.2.2 Fonts
- Headlines Level 1: Arial 12 pt. bold
- Headlines Level 2: Arial 11 pt. bold
- Headlines Level 3: Arial 11 pt. bold
- …

3.2.3 Font sizing
- Text: Arial 11 pt.
- Captions for Figures: Arial 9 pt. bold (below the figure)
- Captions for Tables: Arial 9 pt. (above the table)
- Captions for Formulas: Arial 9 pt. (below the formula)

3.3 Caption for figures, tables and formulas
All figures, tables and formulas must be labelled. WORD provides useful functions for this problem, which are explained on the follow website:

https://support.office.com/en-us/article/Add-captions-in-Word-82fa82a4-f0f3-438f-a422-34bb5cef9c81?omkt=en-US&ui=en-US&rs=en-US&ad=US

The next link explains how to make a list of the captions (List of Figures; List of Tables; or List of Formulas):

https://support.office.com/en-us/article/Create-a-table-of-figures-c5ea59c5-487c-4fb2-bd48-e34dd57f0ec1?omkt=en-US&ui=en-US&rs=en-US&ad=US

3.4 Tips and requirements for the content

3.4.1 Form sheets: Declaration of authorship and Confidentiality clause
The forms supplied should be adapted to the paper or final thesis. Any special regulations from companies (e.g. to add more specific information) should be discussed with the supervisor in advance.

The confidentiality clause is allowed only with prior consent by the supervisor; therefore, it must be discussed in advanced.

For thesis with accepted confidentiality, the 3rd copy of the work is different! It has less content!

Attendance at a colloquium should be open to students and members of research staff.

Declaration of authorship:

Please use the official version provided by the university!

Confidentiality clause (needs special acceptance of supervisor):

This **[Kind of report]** is based on internal and confidential information of the company **[Name of the company]**. Publishing the thesis, any part of it and/or making it accessible to third parties other than necessary within the grading process at the university and the author is not allowed without the explicit permission of the company. After a period of three years, the results may be used (in anonymized form) for research and teaching purposes.

Place / Date	Signature
	(First and last names)

3.4.2   Abstracts and introduction

The following link leads to a useful website about writing technical papers, especially abstracts and introductions:

http://cs.stanford.edu/people/widom/paper-writing.html

3.4.3   References

Projects must be carried out according to the rules of scientific work; students must follow appropriate scientific conduct at all times.

"Plagiarism is a criminal act in Germany!"

Any document that contains copied text or other intellectual property which is not cited correctly (which is considered to be plagiarism) will not be accepted! Be aware that the supervisor checks the documents with software tools. If any serious plagiarism is detected following conferral of a degree, the degree can be revoked.

3.4.4   Structure

The structure of the report/thesis is crucial for correct and complete documentation of your work. You might want to follow the structure of your exposé or a standard structure for reports. While you are enhancing the knowledge of your topic, a more comprehensive, appropriate structure should be developed.

The citation style of scientific papers should follow the Harvard Style (author; date; page number). The following example demonstrates the syntax of citations in this style. More detailed information can be found in (Brink, 2007).

Example of indirect citations:

[TEXT] (Martino 1993, p.161)

Example of direct citations:

„[TEXT]" (Martino 1993, p.161)

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Source:

Martino, Joseph Paul (1993): Technological forecasting for decision making. 3rd ed., New York: McGraw-Hill

Footnotes are used for detailed descriptions or additional information only and not for citations.

The direct citation of literature sources should be used as less as possible, since copying and pasting of literature does not show the student's understanding or individual work. Paraphrasing, however, is encouraged! However, using the same words in a different sentence structure is <u>not</u> paraphrasing[1].

A scientific paper always includes the current state of research. Student paper, in addition, include basic/stand works as well. Use primary, secondary and, when necessary, tertiary literature sources. Sources can be scientific articles presented in journals, magazines, and conference proceedings as well as standard work. Particularly for sources found in the internet, the same quotation style should be used as for primary literature sources. Additionally, the web address (URL) and date of access must be added. Any source which is not reproducible cannot be used in a scientific paper. Internet sources such as blogs, forums, scripts and other insecure sources should not be used. (The obvious exception to this is in the case that your work is an analysis of content of these sources.)

A Citavi literature database must be maintained in parallel and this record of sources is part of the required report submission. The program is licensed by the university, and can be downloaded from the following website:

http://www.citavi.de/en/download.html

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[1] Paraphrasing involves taking a set of facts or opinions and rewording them. When paraphrasing, it is important to keep the original meaning and to present it in your own words.

4 Information about writing a brief exposé of the project topic

A brief exposé of the topic serves as a description and first examination of the topic. The exposé is an aid for the student and for the supervisor, to ensure a common understanding of the topic itself and to **define the scope** of the work. Furthermore, an exposé gives a first idea about a possible methodology and investigative approach to the problem/topic. The exposé also contains the results of a first literature survey on the topic. A thorough literature study must be carried out once the exposé has been accepted.

"The exposé is not part of project documentation; it is a separate document!"

The document should not exceed 3 pages excluding the title page, table of contents, appendices, etc. For assignments and projects, the document should not exceed 2 pages. The questions/keywords listed below are an aid to writing a brief exposé.

Writing an exposé for a project or thesis may take time, though it should not exceed a week of concentrated work. It is essential for all projects to have a sound understanding of the task or problem to work on.

- A Word template for an expose is available here:

http://www.hs-emden-leer.de/fileadmin/user_upload/Labore/Produktionsplanung/Informationen_und_Templates_fuer_Projekte/Template_Expose.docx

5   Project submission and colloquium

The submission of a paper must be discussed and agreed with the first supervisor.

If specific formal requirements exist (e.g. forms and regulations for specific courses of studies) it is mandatory to clarify them in advance. This also includes organizational aspects and tasks to be completed before the submission deadline.

The submission of a paper/project/thesis contains the following:

- The paper in digital form (Word or PDF) and as hard copy. The thesis must be handed in as a bound copy, preferably with author's name and the thesis title on the spine. For all other reports, a stapled paper copy is sufficient.
- Temporary working files (tables, reports, diagrams, programs, simulations, etc.)
- Literature database (Citavi)
- **Poster (A0) (for projects and thesis)**
- Additional required documents (depending on the course of studies e.g. Erasmus program, etc.)

Some of the requirements are specific to Prof. Pechmann and her team.

Colloquium / Project presentation:

The purpose of a presentation is to show the project results as well as to evaluate the work and discuss further work in a precise and understandable way. The presentation needs to be adapted to the target audience, in particular the supervisors. It offers the opportunity for the presenter to demonstrate his/her deep knowledge of the work and to discuss the topic and the results.

The time for presenting a thesis should be 20 to 25 minutes; for a project 10-15 minutes.

A rule of thumb is that a presenter needs approximately two minutes per slide. A template in the corporate design of the university can be downloaded from the following website:

http://www.hs-emden-leer.de/fachbereiche/technik/labore/produktionsplanung.html

6   References

Brink, A. (2007) *Anfertigung wissenschaftlicher Arbeiten: Ein prozessorientierter Leitfaden zur Erstellung von Bachelor-, Master- und Diplomarbeiten; in acht Lerneinheiten*, 3rd edn, München, Oldenbourg.