

The Title of my Thesis Plus Some Text to Exceed a Single Line and Maybe Even Long Enough to Produce Three Lines (but not More!)¹

Template for preparing Master Theses in Mechatronics at UMIT²

Bettina Mayer, BSc

Hall in Tirol, September 12, 2020

Masterarbeit

verfasst im Rahmen eines gemeinsamen Masterstudienprogramms von LFUI und UMIT – Joint Degree Programme

eingereicht an der UMIT – Private Universität für Gesundheitswissenschaften, Medizinische Informatik und Technik, Department für Biomedizinische Informatik und Mechatronik zur Erlangung des akademischen Grades

Diplomingenieurin

Über Antrag der Studierenden wurde der Ausschluss der Benützung der Masterarbeit gemäß § 86 Abs. 4 UG bis zum 1. Jänner 2020 genehmigt.³

Beurteiler:⁴

Univ.-Prof. Dr. Frank Woittennek

Institut für Automatisierungs- und Regelungstechnik

¹Title and subtitle in English if text is written in English. Remaining parts of titlepage must be in German!

²Subtitle is optional.

³Compulsory, if exclusion from use has been approved of. Otherwise not permitted.

⁴Evaluator is advisor of master thesis. Co-advisor must not act as evaluator.

Betreuer:⁵

Univ.-Prof. Dr. Frank Woittennek, Private Universität für Gesundheitswissenschaften, Medizinische Informatik und Technik, Institut für Automatisierungs- und Regelungstechnik

Mitbetreuer:⁶

Univ.-Prof. Dr. Manfred Husty, Universität Innsbruck, Institut für Grundlagen der Technischen Wissenschaften, Arbeitsbereich für Geometrie und CAD

⁵Only scientific staff of the UMIT Tirol or the University of Innsbruck are eligible. Supervisors must satisfy the criteria laid out in Satzungsteil „Studienrechtliche Bestimmungen“ § 24.

⁶Optional co-supervisor that has been approved of when registering the master thesis.

Formal Structure of a Master Thesis

This master thesis is to be printed two-sided. New chapters start on a new page.

- The master thesis is structured as follows:
 - Page 1: Titlepage
 - Page 2: Betreuer/in (equals Evaluator), Mitbetreuer/in (if applicable; at most one)
 - Page 3: Acknowledgment (optional)
 - Page 4: Kurzfassung (in German!)
 - Page 5: Abstract (in English!)
- This is followed by:
 - Table of Contents
 - List of Figures (optional)
 - List of Tables (optional)
 - First Chapter
 - ...
 - Last Chapter
 - Bibliography (numeric citation style as in this template is not obligatory; you may also use an author-year style)
 - Appendix (if necessary)
 - Last page: Verpflichtungs- und Einverständniserklärung (in German!)

Electronic Submission

For electronic submission the thesis is to be converted into pdf-format. It is required that this file is not password protected!

Using the LaTeX Template

The LaTeX template is based on the memoir class. You may use configuration options of this class to customize the look of your thesis.

Peter Wilson. *The Memoir Class for Configurable Typesetting. User Guide*. The Herries Press, Normandy Park, 2016

<http://mirrors.ctan.org/macros/latex/contrib/memoir/memman.pdf>.

Short description of class options

uni: Options are LFUI or UMIT.

type: Options are BA (Bachelor), MA (Master), or PhD (PhD).

lang Options are english or german.

study Options are BauUmwelt (Bau und Umweltingenieurwissenschaften), Bau (Bauingenieurwissenschaften), Umwelt (Umweltingenieurwissenschaften), Mech (Mechatronik), Elek (Elektrotechnik), or Doktorat (Doktorat Technische Wissenschaften).

specialization Options are

- BBP (Baustoffe, Baubetrieb und Projektmanagement)
- KIB (Konstruktiver Ingenieurbau)
- MOS (Modellierung und Simulation)
- EEG (Energieeffiziente Gebäude)
- GVW (Geotechnik, Vermessung und Wasserbau)
- UVW (Umwelttechnik und Verkehrswesen)

This option only has an effect for the Master programs Bauingenieurwissenschaften or Umweltingenieurwissenschaften.

expose Options are false and true. Default is is false. Can be used for all sorts of exposés (BA, MA, PhD).

explanation Options are false and true. Set to false for final version!

```
\documentclass[
uni=UMIT,
type=MA,
lang=english,
study=Mech,
% specialization=BBP,
% expose=false,
% explanation=false,
]{ftwthesis}
```

Exclusion from use (“Sperre”)

If the exclusion from use (“Sperre”) has been approved of, the end of blocking period must be given via the command `\publicafter{}`. If the exclusion from use has not been applied for or has not been granted, this command must not be used.

Acknowledgment

Optional. If not needed, just delete or leave empty.

Kurzfassung

Kurzfassung Ihrer Arbeit in deutscher Sprache. Verpflichtend!

Abstract

Abstract of your thesis in English. Compulsory!

Contents

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1 Information on this Class

The documentclass `ftwthesis` is based on the `memoir` class by Peter Wilson (now maintained by Lars Madsen), see [1]. You may use the configuration option of this class to change the layout of your thesis. For example, the command `\defaultlists` increases the vertical spacing in lists [1, p. 136].

2 Heading at Level 0 (chapter)

2.1 Heading at Level 1 (section)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Heading at Level 2 (subection)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Heading at Level 3 (subsubsection)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Heading at Level 4 (paragraph) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between

this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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2.2 Lists

Example of a List (itemize)

- First item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Example of a List (4 * itemize)

- First item in a list
 - First item in a list
 - * First item in a list
 - First item in a list
 - Second item in a list
 - Third item in a list

- Fourth item in a list
- Fifth item in a list
- * Second item in a list
- * Third item in a list
- * Fourth item in a list
- * Fifth item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list

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Example of a List (enumerate)

1. First item in a list
2. Second item in a list
3. Third item in a list
4. Fourth item in a list
5. Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Example of a List (4 * enumerate)

1. First item in a list
 - a) First item in a list
 - i. First item in a list
 - A. First item in a list
 - B. Second item in a list
 - C. Third item in a list

Table 2.1: Multiplication table for quaternions (example of a table)

	1	i	j	k
1	1	i	j	k
i	i	-1	k	-j
j	j	-k	-1	i
k	k	j	-i	-1

- D. Fourth item in a list
- E. Fifth item in a list
- ii. Second item in a list
- iii. Third item in a list
- iv. Fourth item in a list
- v. Fifth item in a list
- b) Second item in a list
- c) Third item in a list
- d) Fourth item in a list
- e) Fifth item in a list
- 2. Second item in a list
- 3. Third item in a list
- 4. Fourth item in a list
- 5. Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Example of a List (description)

- First** item in a list
- Second** item in a list
- Third** item in a list
- Fourth** item in a list
- Fifth** item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



Figure 2.1: Logo of the UMIT (example for a figure)

2.3 Frequently Asked Questions

Die Kapitel und Abschnittsüberschriften sind nicht zu unterscheiden

Dieses Phänomen betrifft nur Bachelorarbeiten und Exposés und ist beabsichtigt. Für „artikelartige“ Texte ist `\section` die höchste vorgesehene Gliederungsstufe. Verwenden Sie `\section`, `\subsection`, `\subsubsection` etc. und vermeiden Sie `\chapter`.

Eine lange Kapitelüberschrift verursacht Probleme mit dem Zeilenumbruch in der Kopfzeile.

Geben Sie eine optionale Kurzversion der Kapitelüberschrift an:

```
\chapter[Kurze Kapitel\"überschrift]{Eine laaaaaaaaaaaaaange
Kapitel\"überschrift, die Probleme mit dem Zeilenumbruch verursacht}
```

Beachten Sie, dass die Kurzversion auch in Inhaltsverzeichnis aufscheint.

Wie kann ich den Satzspiegel (Seitenränder) ändern?

Verwenden Sie dazu die entsprechenden Befehle der `memoir`-Klasse. Diese werden in Kapitel 2 der Dokumentation [1] beschrieben. Ein Beispiel ist

```
\setlrmarginsandblock{37.125mm}{*}{*}
\setulmarginsandblock{37.125mm}{*}{*}
\checkandfixthelayout
```

Bitte beachten Sie:

- Das Einstellen der Seitenränder ist typographisch anspruchsvoll und hängt unter anderem vom verwendeten Papierformat, der Schriftart und der Art der Bindung ab.
- *Wichtig:* Ändern Sie den Satzspiegel erst nach `\begin{document}`! Ansonsten kann das Layout der Titelseite in unerwünschter Weise betroffen sein.

Wie soll ich Artikel in meine kumulative Dissertation einbinden?

Verwenden Sie das Paket `pdfpages`:

```
\usepackage{pdfpages}
...
\includepdf [pages=-]{mein-artikel.pdf}
```

Eventuell wollen Sie diesen Artikel auch ins Inhaltsverzeichnis aufnehmen:

```
\includepdf [pages=-,%
  pagecommand={%
    \phantomsection%
    \addcontentsline{toc}%
      {section}%
      {Titel f\"ur das Inhaltsverzeichnis}}%
  {mein-artikel.pdf}
```


Bibliography

- [1] Peter Wilson. *The Memoir Class for Configurable Typesetting. User Guide*. The Herries Press, Normandy Park, 2016.
<http://mirrors.ctan.org/macros/latex/contrib/memoir/memman.pdf>.

Verpflichtungs- und Einverständniserklärung

Ich erkläre, dass ich meine Masterarbeit selbständig verfasst und alle in ihr verwendeten Unterlagen, Hilfsmittel und die zugrunde gelegte Literatur genannt habe.

Ich nehme zur Kenntnis, dass auch bei auszugsweiser Veröffentlichung meiner Masterarbeit die Universität, das/die Institut/e und der/die Arbeitsbereich/e, an dem/denen die Masterarbeit ausgearbeitet wurde, und die Betreuerin/nen bzw. der/die Betreuer zu nennen sind.

Ich nehme zur Kenntnis, dass meine Masterarbeit zur internen Dokumentation und Archivierung sowie zur Abgleichung mit der Plagiatssoftware elektronisch im Dateiformat pdf ohne Kennwortschutz bei der/dem Betreuer/in einzureichen ist, wobei auf die elektronisch archivierte Masterarbeit nur die/der Betreuerin/Betreuer der Masterarbeit und das studienrechtliche Organ Zugriff haben.

Hall in Tirol am

.....
Bettina Mayer, BSc