

**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!)<sup>1</sup>**Template for preparing Doctoral Theses at the Faculty of  
Engineering Sciences, University of Innsbruck<sup>2</sup>

Dipl.-Ing. Bettina Mayer, BSc

Innsbruck, September 12, 2020

## Dissertation

eingereicht an der Leopold-Franzens-Universität Innsbruck, Fakultät für  
Technische Wissenschaften zur Erlangung des akademischen Grades

## Doktorin der Technischen Wissenschaften

Über Antrag der Studierenden wurde der Ausschluss der Benützung der  
Dissertation gemäß § 86 Abs. 4 UG bis zum 1. Jänner 2020 genehmigt.<sup>3</sup>

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

<sup>2</sup>Subtitle is optional.

<sup>3</sup>Compulsory, if exclusion from use has been approved of. Otherwise not permitted.



Erste Beurteilerin: <sup>4</sup> Univ.-Prof. Dr. Anke Bockreis, Universität Innsbruck,  
Institut für Infrastruktur, Arbeitsbereich für Umwelttechnik

Zweiter Beurteiler: o. Univ.-Prof. Dipl.-Ing. Dr. Günter Hofstetter, Universität  
Innsbruck, Institut für Grundlagen der Technischen  
Wissenschaften, Arbeitsbereich für Festigkeitslehre

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<sup>4</sup> The evaluators must be coordinated with the Dean of Studies *prior to printing*. Only persons with habilitation are eligible. Only one of the advisors can act as evaluator.



Hauptbetreuerin: <sup>5</sup> Univ.-Prof. Dr. Anke Bockreis, Universität Innsbruck,  
Institut für Infrastruktur, Arbeitsbereich für Umwelttechnik

Zweiter Betreuer: <sup>6</sup> Univ.-Prof. Dr. Manfred Husty, Universität Innsbruck,  
Institut für Grundlagen der Technischen Wissenschaften,  
Arbeitsbereich für Geometrie und CAD

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<sup>5</sup>Only persons with habilitation are eligible.

<sup>6</sup>If applicable.

## Formal Structure of a Doctoral Thesis

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

- The doctoral thesis is structured as follows:
  - Page 1: Titlepage
  - Page 2: first evaluator, second evaluator; only people with habilitation are eligible
  - Page 3: Team of advisors:
    - \* principal advisor
    - \* first co-advisor (if applicable)
    - \* second co-advisor (if applicable)
  - Page 4: Acknowledgment (optional)
  - Page 5: Kurzfassung (in German!)
  - Page 6: 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!)

In case of a cumulative dissertation, the rules of the curriculum must be obeyed. *In particular a verbal description of your own contribution to the individual articles is required.*

## 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=LFUI,
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 University of Innsbruck (example of 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 Dissertation 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 Dissertation die Universität, das/die Institut/e und der/die Arbeitsbereich/e, an dem/denen die Dissertation ausgearbeitet wurde, und die Betreuerin/nen bzw. der/die Betreuer zu nennen sind.

Ich nehme zur Kenntnis, dass meine Dissertation 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 Dissertation nur die/der Betreuerin/Betreuer der Dissertation und das studienrechtliche Organ Zugriff haben.

Innsbruck am .....

.....

Dipl.-Ing. Bettina Mayer, BSc