

Bachelor Thesis

Titel

Titel der Arbeit

Vorgelegt der Fakultät für Wirtschaftswissenschaften
der Universität Duisburg-Essen (Campus Essen)

von:

Vorname Nachname

Musterstr. 90

12345 Essen

Matrikelnummer: **2251234**

Erstgutachter: Reviewer A

Zweitgutachter: Reviewer B

Studiengang: Angewandte Informatik — Network Engineering

Studiensemester: Wintersemester 2017/2018

Contents

Contents	I
Figures	II
Tables	II
Abstract	V
1 General	1
2 Acronyms	3
3 Chapters and Sections	5
1 Section	5
1.1 Subsections	5
4 Imports	7
1 Tables and Figures	7
1.1 Tables	7
1.2 Figures	7
5 Some Blind Text	9
6 BibT_EX and Footnotes	13
Appendix	15
Acronyms	17
Bibliography	21

Figures

4.1	Example of an imported PDF graphic	8
-----	--	---

Tables

4.1	Example of a table	7
-----	------------------------------	---

Acknowledgments

If you want to acknowledge some people or projects, do it here.

Abstract

This document is a short example of how to use this template to write your own thesis. It gives a brief summary of the most important aspects and options that define this template.

1 General

There are 2 different class files available: syssec-report and syssec-thesis.

2 Acronyms

And don't forget, that you can (and really should use) acronyms all over the place. Like this: Return-Oriented Programming (ROP), Analysis of Variances (ANOVAs), ASN.1. They should be automatically indexed as well.

3 Chapters and Sections

This is an example of a numbered chapter. The section number increases automatically and does not need to be stated. To use a unnumbered section (a.k.a. a special section), just use `\section* {Name of unnumbered chapter}`. The hierarchy is chapter → section → subsection → subsubsection → paragraph.

1 Section

You guessed it, this is one of those infamous *sections*.

1.1 Subsections

This is a numerated `\subsection`. There is also a `\subsubsection` command. To create an unnumbered subsection, just add `*` like needed for sections.

1.1.1 Subsubsection

And while we're at it, here's a sub-sub-section for you!

A PARAGRAPH

is you! But there are no dragons, sorry about that.

4 Imports

Large, theses like master theses, and dissertations often get very confusing when written in single document. You can import other .tex files with the `\include{other-latex-file.tex}` command. The style is inherited from the master file and the sections, figures, tables, footnotes, citations, etc. are integrated in the context of the master file.

1 Tables and Figures

In \LaTeX you can use tables and figures which will be automatically added to the List of Tables and List of Figures after the Table of Contents.

1.1 *Tables*

Quantile	0.05	0.1	0.25	0.5	0.75	0.9
	-1.644	-1.281	-0.674	0.000	0.674	1.281
	-1.644	-1.281	-0.674	0.000	0.674	1.281
	-1.644	-1.281	-0.674	0.000	0.674	1.281

Table 4.1: Example of a table

1.2 *Figures*

Figures should be vector graphics where possible. \LaTeX can parse PDF and EPS out of the box but SVG can also be used with the `svg` package. If no vector graphics are available and you need to include raster graphics like JPEG, PNG, or BMP, make sure you have a high resolution and high DPI

image. Note that the resulting PDF file can be very large when using a lot of raster graphics.

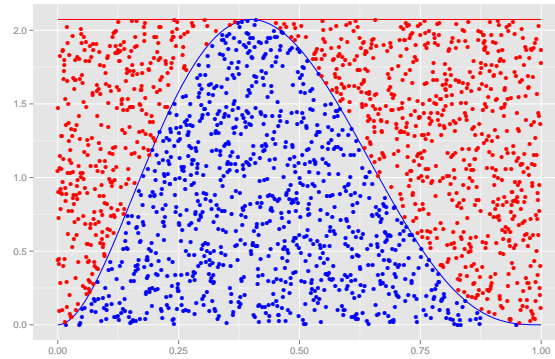


Figure 4.1: Example of an imported PDF graphic

5 Some Blind Text

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet

aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

As can be seen in Listing 5.1, we have an example here. However, this example is not usable with Return-Oriented Programming (ROP).

```
1 int main(int argc, char* argv[], char* env[])
2 {
3     for (size_t i = 0; i < 10; i++) {
4         printf("Hello %d\n", i);
5     }
6 }
```

Listing 5.1: Example C Code

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus

nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet

aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

6 BibT_EX and Footnotes

Every thesis contains references. With BibT_EX¹ you can easily define them in one or more files and load them with L^AT_EX and cite them at any time.

[Mus10]

¹<http://www.bibtex.org>

Appendix

Suspendisse potenti. In hac habitasse platea dictumst. Nullam mattis metus eu quam dictum blandit. Nam nisl nibh, mattis eget laoreet at, tincidunt quis turpis. Nulla ac augue in lectus suscipit ultrices id ac odio. Ut a purus eget nulla adipiscing dapibus a vitae mi. Vestibulum tempor odio a ipsum sollicitudin porttitor. Phasellus porta metus a sem pellentesque eget vulputate urna interdum. Nam euismod odio at libero tempus id eleifend ipsum viverra. In hac habitasse platea dictumst.

Acronyms

ANOVA Analysis of Variance. 3

ASN.1 Abstract Syntax Notation One. 3

ROP Return-Oriented Programming. 3, 10

Ich versichere an Eides statt durch meine Unterschrift, dass ich die vorstehende Arbeit selbständig und ohne fremde Hilfe angefertigt und alle Stellen, die ich wörtlich oder annähernd wörtlich aus Veröffentlichungen entnommen habe, als solche kenntlich gemacht habe, mich auch keiner anderen als der angegebenen Literatur oder sonstiger Hilfsmittel bedient habe. Die Arbeit hat in dieser oder ähnlicher Form noch keiner anderen Prüfungsbehörde vorgelegen.

Vorname Nachname, Essen, den 23.10.2016

Bibliography

- [Mus10] M. Mustermann. “The title of the work”. In: *The name of the journal* 4.2 (July 2010). An optional note, pp. 22–23.