

Bachelor Thesis  
in the field of  
Computer Science

# HFU Thesis Template

This is a fancy Subtitle

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## **Abstract**

[English, 100-120 words]

[German, 100-120 words]



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## List of Abbreviations

**HFU** Hochschule Furtwangen University



# 1 Introduction

## 1.1 How to Use This Document

This document has been designed to be used with Overleaf. However, you should be able to compile it with any LaTeX environment. In case you have never worked with LaTeX before, it may be a good idea to do some tutorials first. The Overleaf documentation explains all important LaTeX concepts and contains helpful examples for all kinds of stuff: [https://www.overleaf.com/learn/latex/Main\\_Page](https://www.overleaf.com/learn/latex/Main_Page)

Unfortunately, Hochschule Furtwangen University does not provide an official LaTeX thesis template at this point in time. This template is student-made and therefore unofficial. Although it has been designed to follow all required guidelines, you should probably double check everything in case these guidelines changed. Use this at your own risk.

In the following, we explain some basic functionality regarding this template.

## 1.2 Abbreviations

Abbreviations can be defined in the `abbreviations.tex` file. Once you defined them, you can use them in a sentence like this: Hochschule Furtwangen University (HFU). As you can see, the first occurrence of an abbreviation will be inserted as a non-abbreviated version followed by the abbreviation in brackets. If you use this abbreviation again, it won't insert the non-abbreviated form anymore: HFU. However, you can force different versions at any point: for the short version use HFU, for the long version use Hochschule Furtwangen University and for the full version use Hochschule Furtwangen University (HFU). Additionally, you can print the plural of an abbreviation (although it doesn't make any sense in this case) using HFUs.

### 1.3 Citations

Citations are implemented using BibLaTeX and will be displayed in IEEE style. Add your bibtex entries to the bibtex.bib file. After that, you can cite them as shown in the following examples.

#### 1.3.1 Normal Quote

This is a normal sentence but we used an external source to come up with its content. Therefore, we must cite the external source using a reference like this: [1]

#### 1.3.2 Direct Quote

*“This is a direct quote. Direct quotes are displayed using quotation marks and must be copied word by word from the original source.”* [1]

#### 1.3.3 Referring to Content Within This Document

You can add a label mark at any position on the page as well as figures, tables and code listings. Exemplary, we labeled this subsection and can refer to it like this: section 1.3.3. You can also use Section 1.3.3, if you want to capitalize the reference at the start of a sentence.

### 1.4 Figures

Figures can be inserted as shown below. Check out the Overleaf documentation for more information on how to use and style figures to your liking: [https://www.overleaf.com/learn/latex/Inserting\\_Images](https://www.overleaf.com/learn/latex/Inserting_Images) As already mentioned above, you can refer to figures by citing its label: figure 1 or Figure 1



Figure 1: HFU Logo



## 1.5 Tables

Tables can be inserted as shown below. Check out the Overleaf documentation for more information on how to use and style tables to your liking: <https://www.overleaf.com/learn/latex/Tables>

Left-aligned column	Centered column	Right-aligned column
Value 1	Value 2	Value 3
Value 4	Value 5	Value 6
Value 7	Value 8	Value 9

Table 1: Example table

## 1.6 Source Code Snippets

Source code can be inserted as shown below. Syntax highlighting is supported for many popular languages. As always, we can define a caption and a label to reference like this: listing 1 or Listing 1

```
1 public static void main(String args[]){  
2     System.out.println("Hello World!");  
3 }
```

Code Listing 1: Hello World in Java

## 1.7 That's it!

Congratulations! You know the basics of Latex as well as how to use this template and you are ready to start writing your thesis now. You can contribute to this template on GitHub in case you find any errors or add functionality.

Good luck!



## 2 Background



## 3 Design



## 4 Implementation





## 5 Conclusions

### 5.1 Summary

### 5.2 Outlook



## Bibliography

- [1] M. Mustermann. "This is an Example Paper we Cite in this Template". In: *This is an epic journal where it was published* 2.1 (2019), pp. 100–200.



## Eidesstattliche Erklärung

Ich versichere, dass ich die vorstehende Arbeit selbstständig verfasst und hierzu keine anderen als die angegebenen Hilfsmittel verwendet habe. Alle Stellen der Arbeit die wörtlich oder sinngemäß aus fremden Quellen entnommen wurden, sind als solche kenntlich gemacht.

Die Arbeit wurde bisher in gleicher oder ähnlicher Form in keinem anderen Studiengang als Prüfungsleistung vorgelegt oder an anderer Stelle veröffentlicht.

Ich bin mir bewusst, dass eine falsche Erklärung rechtliche Folgen haben kann.

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Musterstadt, DD.MM.YYYY Max Musterstudent



## A Monthly Reports

## A.1 Monatsbericht Vorlage

Fakultät Informatik

Thesis-Seminar im Bachelor-Studium – monatliche Berichterstattung

Berichtszeitraum:

<b>Thema der Thesis:</b>	
<b>Bearbeiter/in:</b>	
<b>Kontakt:</b> Sie sind unter <name.nachname@hs-furtwangen.de> erreichbar.	

**Durchgeführte Arbeiten (13-15 Zeilen)**

*Hier sind die im Berichtszeitraum durchgeführten Arbeiten kurz und übersichtlich anzuführen.*

**Erzielte Ergebnisse (8-10 Zeilen)**

*Hier sind die im Berichtszeitraum erzielten Ergebnisse kurz und übersichtlich anzuführen.*

**Abweichungen / Probleme (6-8 Zeilen)**

*Hier sind die im Berichtszeitraum bestehenden Abweichungen vom Plan oder entstandene / noch bestehende Probleme kurz und prägnant anzugeben. Zudem sind die getroffenen Maßnahmen zu nennen.*

**Ausblick über die geplanten Tätigkeiten und Ergebnisse des nächsten Berichtszeitraums (4-6 Zeilen)**



## **B Another Important Appendix**