

Phoebe's Official LaTeX Template & Style Guide v0.1

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Abstract. Every article is required to include an abstract. This should be a short summary of the content with the most important results. It should be no longer than 250 words. This document is part of the official \LaTeX template for Phoebe. Included are a few examples on how to include equations, figures or tables.

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Keywords: Phoebe, LaTeX, Template

1 Introduction

Phoebe is an open access journal that aims to give physics students the opportunity to document their personal gain in knowledge for themselves and others. Many exciting discussions, e.g. during breaks of lectures, which allow a deeper understanding, are usually only caught by a small part of the students. Until now, there has unfortunately been no way to record these insights in the long term and make them available to others. This is where Phoebe wants to start and promote a broader discourse.

2 General Instructions

2.1 Getting started

```
\documentclass[language=english]{phoebe}

% define some variables
\title{}
\author{Jane Doe}
\date{\today}
\email{phoebe@uni-heidelberg.de}
\keywords{Phoebe, LaTeX, Template}
\abstract{}

% load file with bibliography
\addbibresource{references.bib}

\begin{document}

\maketitle

% your text goes here.

\printbibliography

\end{document}
```

2.2 Article Length

The article should be 2–5 pages with this template. In special cases an article can be longer...

2.3 Abstract

Please add a short abstract of 250 words or less. The abstract should provide the reader with a rough overview of the article's content. Usually, the text includes information about the context, methods and results and makes a few closing remarks.

2.4 LaTeX Packages

If you need more packages please add them to the preamble. Please do not alter the class file. In case of compiling errors please contact phoebe@uni-heidelberg.de.

3 Typography

This section provides some guidelines on how the article should be formatted. Many of them are already implemented in the class file and the authors do not need to worry about them.

3.1 Punctuation

missing...

3.2 New Paragraphs

If you want to start a new paragraph, you could either use the \TeX command `\par` or leave a blank line (this has the same effect). The commonly used `\\` has a different effect, depending on the environment and only starts a new line. It should therefore be avoided.

3.3 Headings

Only sections and subsections are allowed. Please do not use subsubsections.

3.4 Hyphen and Dash

A hyphen (single -) is used to combine words (e.g. low-density). The en-dash (two --) is slightly larger and is used to indicate ranges (e.g. this month we publish 2–5 articles). The en-dash is identical in length to the minus sign. When in

math mode, \LaTeX will automatically use a minus sign when a single - is used. em-dashes (- -) should not be used in the journal.

\LaTeX assumes that a period marks the end of a sentence and as such puts a bit of extra space after it. This is wrong if the period is used in an abbreviation, e.g. “i.e.” To avoid this, place a space (e.g. \) after the period. In the previous example, the abbreviation period also marks the end of the sentence. In such case only one period is required.

3.5 Quotation Marks

It is strongly recommended to make use of csquotes as “This package provides advanced facilities for inline and display quotations”. Should you decide to write your article in english, you should load the document class with the english option.

3.6 Units

Variables are set in italics (this happens automatic in math mode), however units are always roman (upright). They should be separated by a non-breaking space. For reciprocal units, use a superscript, e.g. cm s⁻¹. Use either SI or cgs units.

Please make use of the siunitx package (already loaded with this class) as it takes care of the aforementioned rules. If you need a unit that is not already defined, you can define your own units like so

```
\DeclareSIUnit\parsec{pc}
```

The axis of plots must have the according unit. This should be written as x/cm . Note that commonly found notation $x[\text{cm}]$ is not acceptable. Square brackets denote the unit of a quantity (just like value is denoted by curly brackets), i.e. $x = \{x\}[x]$. Take the example $x = 12\text{ cm}$, i.e. $[x] = \text{cm}$. For more details, see section 7 of the [NIST Guide to the SI](#).

3.7 Hyperlinks and URLs

```
\url{phoebe.pubpub.org}
\href{phoebe.pubpub.org}{Phoebe}
```

Please use \url for writing blank URLs, e.g. <https://phoebe.pubpub.org>, and \href if you want to write a description instead, e.g. [Phoebe](#). URLs without https:// won’t usually work.

Sections, equations, figures and tables can be referenced by using label and ref commands.

```
\section{Methods}
\label{sec:methods}

See \ref{sec:methods} for the methods.
```

The value inside label is completely arbitrary, however, there are some conventions you might follow:

Tab. 1. Conventions for labelling objects in \LaTeX .

Convention	Object
sec	Section
ssec	Subsection
eq	Equation
fig	Figure
tab	Table

4 Math

4.1 Equations

```
\begin{equation}
\int_{-\infty}^{+\infty} e^{-x^2} dx = \sqrt{\pi}
\end{equation}
```

$$\int_{-\infty}^{+\infty} e^{-x^2} dx = \sqrt{\pi} \quad (1)$$

```
\begin{align}
\end{align}
```

Equations should always be punctuated. Vectors are set in bold (no arrow).

4.2 Differentials

```
\frac{\mathrm{d}f(x)}{\mathrm{d}x}
```

$$\frac{df(x)}{dx} \quad (2)$$

4.3 Cases

```
f(n) = \begin{cases}
n/2 & n \text{ is even} \\
3n+1 & n \text{ is odd}
\end{cases}
```

$$f(n) = \begin{cases} n/2 & n \text{ is even} \\ 3n+1 & n \text{ is odd} \end{cases} \quad (3)$$

4.4 Matrices

```
\begin{pmatrix}
0 & 1 \\
1 & 0
\end{pmatrix}
```

$$\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix} \quad (4)$$

Tab. 2. *Some Shakespeare's plays.*

Title	Type	Year
A Midsummer Night's Dream	Comedy	1594
Romeo and Juliet	Tragedy	1595
Much Ado About Nothing	Comedy	1599
Hamlet	Tragedy	1601
Henry VIII	History	1613

5 Figures and Tables

Here is an example how to include a Figure. If you feel the need to use subfigures, go for it!

```
\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{tex.jpg}
\caption{This is an example for a figure. The caption
is below the image. Credit: \url{https://tug.org
/}.}
\label{fig:example}
\end{figure}
```

And here is an example for a table

```
\begin{table}
\begin{center}
\caption{Your caption goes here.}
\setlength{\defaultaddspace}{0.5em}
\begin{tabularx}{\columnwidth}{ll}
\toprule
Column 1 & Column 2 \\
\midrule
A & 1 \\
B & 2 \\
\bottomrule
\end{tabularx}
\end{center}
\end{table}
```

6 Bibliography

We use `biblatex` with `biber` as the backend for the references. The file with the entries should be loaded before the main document starts with `\addbibresource{filename.bib}`. There are two main citation commands: for in-line citations use `\citet{}` and for citations in parantheses use `\citep{}`.

```
@Article{phoebe2023,
author
}
```

See Ahrens, 2017.

```
@Book{ahrens2017,
author = {Ahrens}, Söhnke},
title = {Das Zettelkasten-Prinzip},
year = {2017},
publisher = {BoD -- Books on Demand}
}
```

```
@Book{Osterbrock+2006,
author = {{Osterbrock}, Donald E. and {Ferland},
Gary J.},
```

```
publisher = {University Science Books},
title = {{Astrophysics of gaseous nebulae and
active galactic nuclei}},
year = {2006},
adsnote = {Provided by the SAO/NASA Astrophysics
Data System},
adsurl = {https://ui.adsabs.harvard.edu/abs/2006
agna.book.....0},
}
```

References

Ahrens, Sönke (2017). *Das Zettelkasten-Prinzip*. BoD – Books on Demand.

A Additional packages

Here is a list of additional packages that you might find useful

- `tensor`
- `pgf`