

Book Template

v0.2.0

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MIT

Write beautiful scientific book or thesis with Typst

Mathieu Aucejo

This Typst package is a proposed template for writing thesis dissertations, French habilitations, or scientific books.

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Part I

Usage

I.1 Using bookly

To use the `bookly` template, you need to include the following line at the beginning of your typ file:

```
#import "@preview/bookly:0.1.0": *
```

I.2 Initializing the template

After importing `bookly`, you have to initialize the template by a show rule with the `#bookly` command. This function takes an optional argument to specify the title of the document.

```
#show: bookly.with(  
  ...  
)
```

```
#bookly(  
  {title}: "Title",  
  {author}: "Author Name",  
  {theme}: "fancy",  
  {layout}: "standard",  
  {lang}: "fr",  
  {fonts}: "default-fonts",  
  {colors}: "default-colors",  
  {title-page}: none  
)[body]
```

Argument

```
{title}: "Title"
```

str

Title of the book or the thesis.

Argument

```
{author}: "Author Name"
```

str

Author of the book.

Argument

`{theme}: "fancy"`

str

Theme of the document. Possible values are:

- "fancy" (default)
- "modern"
- "classic"

Argument

`{layout}: "standard"`

str

Layout of the document. Possible values are:

- "standard" (default)
- "tufte"

Argument

`{lang}: "fr"`

str

Language of the document.

Supported languages French ("fr" – default) and English ("en")

Argument

`{fonts}: "default-fonts"`

dictionary

Fonts used in the document. It contains the following keys:

- body `str` – Font used for the body text (default: "New Computer Modern")
- math `str` – Font used for mathematical equations (default: "New Computer Modern Math")
- raw `str` – Font used for raw text (default: "DejaVu Sans Mono")

Argument

`{title-page}: none`

content

Content of the title page (default: `none`).

Argument

`{colors}: "default-colors"`

dictionary

Colors used in the document. It contains the following keys:

- primary `color` – Primary color (default: `rgb("#c1002a")`)
- secondary `color` – Secondary color (default: `rgb("#dddddd").darken(15%)`)
- boxeq `color` – Color of equation boxes (default: `rgb("#dddddd")`)
- header `color` – Color used for adapting the color of the document headers (default: `rgb("#dddddd").darken(25%)`)

I.2.1 Initialization example

```
#show: bookly.with(  
  author: "Author Name",  
  book-config: (  
    fonts: (  
      body: "Lato",  
      math: "Lete Sans Math"  
    ),  
    theme: "modern",  
    lang: "en",  
    logo: image("path_to_image/image.png")  
  )  
)
```

I.2.2 Themes gallery

Parts



(a) "fancy"

(b) "modern"

(c) "classic"

1

First chapter

Chapter 1

First chapter

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Quis ipsum suspendisse ultrices gravida. Risus commodo viverra maecenas accumsan.

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13/32

13

(a) "fancy"

(b) "modern"

(c) "classic"

Unnumbered chapters

Introduction

Goals

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Quis ipsum suspendisse ultrices gravida. Risus commodo viverra maecenas accumsan.

Sub-goals

Figure 1 – Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Introduction

Goals

Sub-goals

Figure 1 – Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

Introduction

Goals

Sub-goals

Figure 1 – Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.

9/32

9

(a) "fancy"

(b) "modern"

(c) "classic"

Sections

1. First chapter

1.1. Goals

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$$\int_0^1 f(x) dx = F(1) - F(0)$$
$$\int_0^1 f(x) dx = F(1) - F(0)$$

1.2. Code

Figure 1.1 illustrates the case of industrial users using absorbents.

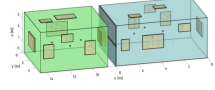


Figure 1.1 - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Figure 1.2 presents the map of Cham. Figure 1.2b illustrates the region of Cham [1].

1. First chapter

1.1. Goals

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$$\int_0^1 f(x) dx = F(1) - F(0)$$
$$\int_0^1 f(x) dx = F(1) - F(0)$$

1.2. Code

Figure 1.1 illustrates the case of industrial users using absorbents.

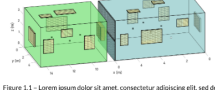


Figure 1.1 - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Figure 1.2 presents the map of Cham. Figure 1.2b illustrates the region of Cham [1].

1. First chapter

1.1. Goals

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

$$\int_0^1 f(x) dx = F(1) - F(0)$$
$$\int_0^1 f(x) dx = F(1) - F(0)$$

1.2. Code

Figure 1.1 illustrates the case of industrial users using absorbents.

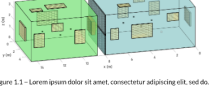


Figure 1.1 - Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Figure 1.2 presents the map of Cham. Figure 1.2b illustrates the region of Cham [1].

(a) "fancy"

(b) "modern"

(c) "classic"

I.2.3 Layout

The template currently supports two layouts: standard and tuftte.

The standard layout is the default layout, with symmetric margins. It is the most common layout for books and theses. Some examples of the standard layout are presented in [Section I.2.2](#) “Themes gallery”.

The tuftte layout is inspired by the works of Edward Tufte, which emphasizes simplicity and clarity, often using wide margins for notes and figures. It is particularly suitable for books or theses that require extensive annotations or side comments. To implement the tuftte layout, the template comes with several helper functions, implementing side notes, side figures, full width blocks, etc. (see [Section III.7](#) for details). Some examples of the tuftte layout are presented below.

1. First chapter

1.1. Goals

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

$$\int_0^1 f(x) dx = F(1) - F(0)$$
$$\int_0^1 f(x) dx = F(1) - F(0)$$

1.2. Code

Figure 1.1 is a beautiful typst logo.




Figure 1.2 the Typst logo. Figure 1.2b is a Typst logo.

2. Second chapter

2.1. Goals

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

$$\int_0^1 f(x) dx = F(1) - F(0)$$
$$\int_0^1 f(x) dx = F(1) - F(0)$$

2.2. Code

Figure 1.1 is a beautiful typst logo.




Figure 1.2 the Typst logo. Figure 1.2b is a Typst logo.

(a) Figures and side figures

(b) Citations

(c) Full width elements

Part II

Book content

The content of the book should be written in the main `typ` file or in additional files. The template provides a basic structure for writing a book.

In general, the section of the main file corresponding to the book content is structured as follows:

```
#show: front-matter

#include "front-content.typ"

#show: main-matter

#tableofcontents()

#listoffigures()

#listoftables()

#part("Main body")

#include "chapter.typ"

#bibliography("bibliography.bib")

#show: appendix

#part("Document appendices")

#include "appendix.typ"
```

The content of the thesis is divided into three main sections: `front-matter`, `main-matter`, and `appendix`. These elements are accompanied by additional functions to facilitate writing.

II.1 Environments

The template provides three environments to structure the thesis content:

1. **front-matter**: environment for preliminary content (cover page, abstract, acknowledgments, etc.). Pages are numbered with Roman numerals and chapters are not numbered. To activate this environment, insert the following command in the main `typ` file at the desired location:

```
#show: front-matter
```

2. **main-matter**: environment for the main content (introduction, tables of contents, chapters, conclusion, bibliography, etc.). Pages and chapters are numbered with Arabic numerals. To activate this environment, insert the following command in the main typ file at the desired location:

```
#show: main-matter
```

3. **appendix**: environment for the appendices. Pages are numbered with Roman numerals and chapters are numbered with letters. To activate this environment, insert the following command in the main typ file at the desired location:

```
#show: appendix
```

II.2 Parts and chapters

To structure the book content, you can define parts using the `#part` function. To insert a new part, use the following command:

```
#part("Part title")
```

Despite chapters can be defined using the standard `Typst` markup language. This template defined a fonction `#chapter` that allows to avoid boilerplate code, such as the manual inclusion of standard elements like title, abstract, and minitoc.

`#chaptitre((title), {abstract}: none, {toc}: true, {numbered}: true)[body]`

Argument — `{title}` str
Chapter title.

Argument — `{abstract}: none` content
Summary displayed below the chapter title.

Argument — `{toc}: true` bool
Indicates whether a mini table of contents should be displayed at the beginning of the chapter.

Argument

`(numbered): true``bool`

Indicates whether the chapter should be numbered.

```
#chapter(
  "First chapter",
  abstract: lorem(20),
)[
  // Content of the chapter
]
```

If you use a *.typ file for each chapter, you can type at the top of the file the following code.

```
#show: chapter.with("First chapter", abstract: lorem(20), toc: true)

// Content of the chapter
== First section
```

For unnumbered chapters, you can simply use the `#chapter-nonum` function. This function assumes that you have a *.typ file per chapter.

```
#show: chapter-nonum.with()

// Content of the chapter
= Chapter title
```

II.3 Tables of contents

The template defines several commands to facilitate the creation of tables of contents:

- `#tableofcontents()` : Table of contents
- `#listoffigures()` : List of figures
- `#listoftables()` : List of tables

A mini table of contents is automatically generated automatically by using the command `#minitoc` in a chapter. This function is a wrapper of the `#suboutline` function provided by the `suboutline` package.

Part III

Helper functions

III.1 Figure captions

The package include the command `#ls-caption` to manage long and short captions for figures and tables. Short caption are displayed in the list of figures or tables, while long captions are used in the main text and in the table of contents.

```
#figure(  
  rect(),  
  caption: ls-caption("Long caption", "Short caption")  
)
```

The code of the command `#ls-caption` comes from the [Typst book](#)¹ by Sitandr.

III.2 Subfigures

In general, figures are inserted into the document using the `#figure` function from `Typst`. However, `Typst` currently does not provide mechanisms for handling subfigures (numbering and referencing). To address this limitation, the template includes a `#subfigure` function that manages subfigures appropriately. This function wraps the `#subpar.grid` function from the `subpar` package.

```
#subfigure(  
  figure(image("image1.png"), caption: []),  
  figure(image("image2.png"), caption: []), <b>,  
  columns: (1fr, 1fr),  
  caption: [Figure title],  
  label: <fig:subfig>,  
)
```

The example above shows a figure composed of two subfigures. The first subfigure has a caption, while the second has a `label` but no title. The second subfigure can be referenced in the text using the command `@b`.

¹<https://sitandr.github.io/typst-examples-book/book/snippets/chapters/outlines.html?highlight=long#long-and-short-captions-for-the-outline>

III.3 Equations

To highlight an important equation, use the `#boxeq` function.

```
$
#boxeq[$p(A|B) \prop p(B|A) \space p(A)$]
$
```

To create an equation without numbering, use the `#nonumeq` function.

```
#nonumeq[$\int_0^1 f(x) \diff x = F(1) - F(0)$]
```

III.4 Information boxes

The template provides several types of boxes to highlight different kinds of content:

- `#info-box` for remarks;
- `#tip-box` for tips;
- `#warning-box` for warnings;
- `#important-box` for important information;
- `#proof-box` for proofs;
- `#question-box` for questions.

```
#info-box[#lorem(10)]
#tip-box[#lorem(10)]
#warning-box[#lorem(10)]
#important-box[#lorem(10)]
#proof-box[#lorem(10)]
#question-box[#lorem(10)]
```

The appearance of the boxes depends on the selected theme (see the “Themes gallery” section).

The information boxes described above are built using the `#custom-box` function, which allows you to create custom boxes. This generic function takes the following parameters:

`#custom-box`(**{title}**): **none**, (**{icon}**): **"info"**, (**{color}**): **rgb("#1d90d0")**)[**body**]

Argument —

```
{title}: none
```

str

Name of the box.







Argument —

```
{icon}: "info"
```

str


Name of the icon to display in the box.

Available icons are:

-  : "alert"
-  : "info"
-  : "question"
-  : "report"
-  : "stop"
-  : "tip"

Argument

{color}: `rgb("#1d90d0")`

 color

Box color.

III.5 Title pages

The template provides two functions to create title pages: one for a book and one for a thesis :

```
#book-page-title(
  {subtitle}: "Book subtitle",
  {edition}: "First edition",
  {institution}: "Institution",
  {series}: "Discipline",
  {year}: "2024",
  {cover}: none,
  {logo}: none
)[body]
```

Argument	
{subtitle}: "Book subtitle"	str
Subtitle of the book.	
Argument	
{edition}: "First edition"	str
Edition of the book.	
Argument	
{institution}: "Institution"	str
Name of the institution.	
Argument	
{series}: "Discipline"	str
Name of the series.	
Argument	
{year}: "2024"	str
Year of publication.	
Argument	
{cover}: none	image
Cover image of the book.	
Argument	
{logo}: none	image
Logo of the book.	

```
#show: book.with(
  title-page: book-title-page(
    logo: image("path_to_logo/logo.png"),
    cover: image("path_to_image/book-cover.jpg")
  )
)
```

```
#thesis-page-title(
  {type}: "phd",
  {school}: "School name",
  {doctoral-school}: "Name of the doctoral school",
  {supervisor}: ("Supervisor name",),
  {cosupervisor}: none,
  {laboratory}: "Laboratory name",
  {defense-date}: "01 January 1970",
  {discipline}: "Discipline",
  {specialty}: "Speciality",
  {committee}: (:),
  {logo}: none
)[body]
```

Argument

{type}: "phd"

str

Type of thesis. Two values are possible:

- "phd" for a doctoral thesis
- "habilitation" for a French habilitation

Argument

{school}: "School name"

str

Name of the institution where the thesis was prepared.

Argument

{doctoral-school}: "Name of the doctoral school"

str

Name of the doctoral school.

Argument

{supervisor}: ("Supervisor name",)

array

Name of the thesis supervisor(s) or the guarantor of the habilitation.

Argument

{cosupervisor}: none

array

Name of the thesis co-supervisor(s).

Argument

`{laboratory}: "Laboratory name"`

str

Name of the research laboratory.

Argument

`{defense-date}: "01 January 1970"`

str

Date of the thesis defense.

Argument

`{discipline}: "Discipline"`

str

Name of the discipline.

Argument

`{specialty}: "Speciality"`

str

Name of the specialty.

Argument

`{committee}: (:)`

array

Name of the thesis committee members. Each element of the array is a `dictionary` with the following keys:

- `name`: Name of the committee member.
- `position`: Position of the committee member (e.g., “Associate Professor”, “Professor”, etc.).
- `affiliation`: Affiliation of the committee member (e.g., “University Name”).
- `role`: Role of the committee member (e.g., “Chair”, “Member”, “Reviewer”).

Argument

`{logo}: none`

image

Logo of the institution.

```
#let committee = (
  (
    name: "Hari Seldon",
    position: "Full Professor",
    affiliation: "Streeling university",
    role: "President",
  ),
  (
    name: "Gal Dornick",
    position: "Associate Professor",
    affiliation: "Synnax University",
    role: "Reviewer"
  ),
)

#show: book.with(
  title-page: thesis-title-page(
    supervisor: ("Supervisor A", "Supervisor B"),
    cosupervisor: ("Co-supervisor A", "Co-supervisor B"),
    committee: committee
  )
)
```

For both title pages, the title of the document and its author are automatically generated based on the information given when initializing the template.

III.6 Back cover

A back cover of the document is automatically generated using the `#back-cover` function, which displays information about the thesis (title and author), as well as a summary in French and English.

`#back-cover({resume): none, {abstract): none, {logo): none)`

Argument	
{resume}	content
Summary of the document in French.	
Argument	
{abstract}	content
Summary of the document in English.	

Argument —

`(logo)` array

Logo of the back cover.

```
#let logos = (align(left)[#image("images/devise_cnam.svg", width:
45%)], align(right)[#image("images/logo_cnam.png", width: 50%)])

#back-cover(lorem(10), lorem(10), logos)
```

III.7 Tufte layout

When the tufte layout is selected, several customizations are applied to adapt the appearance of various elements (figures, tables, equations, etc.) to the Tufte style.

#sidenote((dy): **-1.5em**, (numbered): **true**)[body]

Argument —

`(dy): -1.5em` length

Vertical adjustment of the sidenote position.

Argument —

`(numbered): true` bool

Indicates whether the sidenote should be numbered.

When the layout is set to standard, the **#sidenote** function behaves like a standard **#footnote**.

#sidecite((key), (dy): **-1.5em**, (supplement): **none**)

Argument —

`(key)` label

Key of the reference to cite.

Argument —

`(dy): -1.5em` length

Vertical adjustment of the sidecite position.

Argument —

`(supplement): none` str

Supplementary text to add before the citation (e.g., “see”, “e.g.”, etc.).

When the layout is set to standard, the **#sidecite** function behaves like a standard **#cite**.

#sidefigure(**{content}**, **{dy}**: -1.5em, **{label}**: none, **{caption}**: none)

Argument

{content}

content

Content of the figure.

Argument

{dy}: -1.5em

length

Vertical adjustment of the sidefigure position.

Argument

{caption}: none

content

Caption of the figure.

Argument

{label}: none

label

Label of the figure.

#fullfigure(**{content}**, **{label}**: none, **{caption}**: none)

Argument

{content}

content

Content of the figure.

Argument

{caption}: none

content

Caption of the figure.

Argument

{label}: none

label

Label of the figure.

When the layout is set to standard, **#sidefigure** and **#fullfigure** behave like a standard **#figure**.

Part IV

Roadmap

The template is under development. Here is the list of features that are implemented or will be in a future version.

Themes

- ✓ fancy
- ✓ modern
- ✓ classic
- ☐ User-defined themes (requires a refactoring of the theming)

Layout

- ✓ Standard layout
- ✓ Tufte layout
- ☐ User-defined paper and margins for standard and tufte layouts

Cover pages

- ✓ Title page
- ✓ Back cover

Environments

- ✓ Creation of the front-matter environment
- ✓ Creation of the main-matter environment
- ✓ Creation of the appendix environment

Parts and chapters

- ✓ Creation of a document part – `#part`
- ✓ Creation of a document chapter – `#chapter`
- ✓ Creation of an unnumbered chapter – `#chapter-nonum`

Tables of contents

- ✓ Creation of the table of contents – `#tableofcontents`
- ✓ Creation of the list of figures – `#listoffigures`
- ✓ Creation of the list of tables – `#listoftables`
- ✓ Creation of a mini table of contents at the beginning of chapters using the suboutline package (see [link²](https://typst.app/universe/package/minitoc))
- ✓ Customization of entries (appearance, hyperlink) by modifying the `outline.entry` element
- ✓ Localization of the different tables

Figures and tables

- ✓ Customization of the appearance of figure and table captions depending on the context (chapter or appendix)
- ✓ Short titles for the lists of figures and tables
- ✓ Creation of the `#subfigure` function for subfigures via the subpar package

²<https://typst.app/universe/package/minitoc>

IV Roadmap

Equations

- ✓ Adaptation of equation numbering depending on the context (chapter or appendix)
- ✓ Creation of a function to highlight important equations – [#boxeq](#)
- ✓ Creation of a function to define equations without numbering – [#nonumeq](#)
- ✓ Use of the `equate` package to number equations in a system like (1.1a)

Boxes

- ✓ Creation of information boxes to highlight important content

Bibliography

- ✓ Verification of the reference list via `bibtex`
- ✓ Same for `hayagriva` (see [documentation](#)³)

³<https://github.com/typst/hayagriva/blob/main/docs/file-format.md>