



University of
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LaTeX Tutorial

Cognitive and Behavioral Decision Research (CBDR)

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First things first

How to pronounce LaTeX

LaTeX is usually pronounced *lah-tech* or *lay-tech* (with *tech* sounding like *technology*)

What is LaTeX?

- Typesetting system commonly used for scientific writing
- Unlike word processors such as Microsoft Word (which produces binary files), LaTeX uses a **plain text** approach
- Users write their document content and formatting commands in a single file, which LaTeX converts into a PDF file

Why LaTeX?

Advantages

- **Separates content from design.** LaTeX formats all your text for you with commands that you use => No more nervous breakdowns trying to layout your Word document
- **Easy integration with Zotero** => No more error-prone manual in-text citations
- **Invisible comments** in the .tex file that aren't rendered in the .pdf => Leave yourself comments without disrupting the reading flow
- Suitable for **version control** with Git (whereas binary files like Word documents are not) => View exactly what you changed without having to save a separate new version of the document (see changes made in `example_word_doc.docx` vs. `latex_ms_template_apapa7.tex`)
- **Free and works on all operating systems** => No matter if you use Mac OS, Windows, or Linux: You can open .tex files in any text editor without compatibility issues

Disadvantages

- Initially harder to use than Word -> Requires some time and commitment to get used to
- Raw .tex file not as pretty as Word document -> No immediate preview of how the .tex file will be rendered
- Tables are a bit of a nightmare...

Basic setup

Basic structure of a .tex file

Preamble

- Define type of document you want to create (article, book)
- Load packages for things like including figures or formatting tables (analogous to R)

Document environment

- Delimit the beginning and end of your document

Content

- The text you write divided into sections (includes figures and tables)

Commands

- Throughout the document, commands (starting with \) tell LaTeX how to format the document

Level I. Use Overleaf

Simply go to [Overleaf](#) and start using templates to write and compile your text.

To avoid manual references/bibliography, install:

- [Zotero](#)
- [Better BibTeX](#) extension. Better BibTeX automatically updates your library export when you make additions to your library.

When exporting a library from Zotero:

- Export collection
- Format: Better BibLaTeX
- ☒ Keep updated
- ☒ Background export

Overleaf allows library integration.

Level II: LaTeX on your computer

If you plan on using LaTeX more extensively, consider setting it up locally on your computer:

- Install a [TeX distribution](#)
- Install a LaTeX editor. Sadly, [Atom](#) was archived. [Visual Studio Code](#) is a good alternative.

When using VS Code, the following extensions are useful (among others):

- LaTeX Workshop: For typesetting and compiling PDFs
- LaTeX Utilities: Provides accurate word count
- GitLens: For handling anything git-related within VS Code
- Code Spell Checker: Basic spell checker

Level III: Start using Git

To keep your files tidy and updated (without having to save them as FINAL_VERSION_V9), make the most of LaTeX by integrating it with Git.

- Install [Git](#) for version tracking
- Install a Git client for easier use: e.g., [Sourcetree](#)
- Or use Git from your terminal

For more information on Git, see this [datacamp](#) or [W3Schools](#) tutorial.

Let's get started

Example .tex file

Head to [Overleaf](#) and open one of the [University of Zurich](#) templates, or copy and paste the contents of `latex_ms_template_apa7.tex` inside the 'Manuscript Template' folder into a blank project.

Or you can already try rendering the .tex file in your local text editor (e.g., Visual Studio Code).

To add more citations, check out the `example.bib` file and integrate some references in the text.

- In-text citations: `\textcite{article_citation_key}`
- Parenthetical citations: `\parencite{article_citation_key}`

See `biblatex-cheatsheet.pdf` for support on how to reference publications in a .tex file.

Where to learn more about LaTeX

- [Overleaf](#) has great documentation