



# LaTeX

[LaTeX](#) is a markup language for documents, particularly those with mathematical content. LaTeX can take a while to learn, but is capable of powerful control of formatting and syntax.

One major advantage to LaTeX is the use of its bibliography packages, [BibTeX](#) and [BibLaTeX](#). These packages allow you to import citations from a database file and customize how the citations and references are formatted. LaTeX also cleanly exports compiled documents to `pdf`.

Another advantage is the (relative) ease of switching templates for different journals or outlets. Because LaTeX (mostly) separates format from content, switching from one template to another should be as simple as changing the document class or style. Additional packages can complicate this, however, but it is often simpler than reformatting a Word document.

You can write LaTeX documents locally using either a standard text editor (compiling using the command line) or a dedicated LaTeX editor. However, we use [Overleaf](#) for collaborative LaTeX documents due to the ability to share and track changes.

## Alternatives

There are two reasons we do not mandate the use of LaTeX, though basic familiarity with LaTeX is useful and may be required for certain courses.

1. LaTeX can be difficult to learn, and may not be necessary for your manuscripts or other materials if they do not include typesetting mathematical content.
2. Not all journals accept manuscripts formatted with LaTeX.

As a result, the choice of typesetting software is dependent on one's comfort (and the preferences of your collaborators --- don't use LaTeX if your co-authors are not comfortable with it!) and the intended publication outlet. [Markdown](#) and Microsoft Word may be appropriate alternatives depending on these considerations.

## Learn More

- [Learn LaTeX in 30 Minutes](#) from Overleaf.

- [The Not So Short Introduction to LaTeX 2e](#)
- A [collection of posts on LaTeX](#) on Water Programming.

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