UTRGV

Writing a Masters Thesis with LaTeX

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Overview

What is LaTeX and Why Should I Use It?

- ► LaTeX is a **typesetting language**. It is used to prepare all sorts of documents.
- ► It is the standard language use by nearly all mathematicians.
- ► When used properly, it separates content and style.

Getting Started with LaTeX

The easiest way to get started with LaTeX is by signing up with a service such as Overleaf or Sharelatex.

- ▶ www.overleaf.com
- ▶ www.sharelatex.com

For faster compilation, download a LaTeX distribution such as TeX Live. Along with a LaTeX editor such as TeXworks.

- ▶ www.tug.org/texlive/
- ▶ www.tug.org/texworks/

UTRGV Thesis Template

The UTRGV Thesis Template is available at
`https://github.com/UTRGV-SMSS/Thesis-Template`

Download the zip file from there. If you are using a service such as
Overleaf, upload the zip file to create a new project.

- ► Backup your files regularly.
- ► Redownload the template and update the UTRGVthesis.cls file
  before you submit your thesis for review.
- ► Report any issues you have with the template on that website.
- ► Get help from us.

Useful References

- ▶ Introduction to LaTeX on YouTube from GVSU Math
  `https://youtu.be/cTEfw-jUqAg`
- ▶ LaTeX Wikibook
  `https://en.wikibooks.org/wiki/LaTeX`
- ▶ Cheatsheet
  `http://joshua.smcvt.edu/undergradmath/undergradmath.pdf`
- ▶ The Short Math Guide for LaTeX
  `http://tex.loria.fr/general/downes-short-math-guide.pdf`
  is a good reference for typesetting math.
- ▶ Google and StackOverflow (prepend the word "Latex" to your search)

Creating Tables

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Use the following website to generate LaTeX tables:
`http://www.tablesgenerator.com`

My workflow is to keep an Excel file of table data. I copy that into the website, by clicking "File" then "Paste Table Data".

It is a good idea to use the "booktabs" style.

Thesis Template with LyX

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We've created a rudimentary template LyX thesis template, that does not have many features, but can be used together with the thesis template.

`https://github.com/UTRGV-SMSS/LyX_Thesis_Template`

1. Download and use LyX Thesis Template to write your thesis.
2. Download the LATEX UTRGV Thesis Template.
3. Export your LyX document to plain LATEX and move this file to the LATEX UTRGV Thesis Template Directory.
4. Add \usepackage{docmute} to preamble of "main.tex" file.
5. Use the \input{} command to include your document in the "main.tex" file.

Bibliography Management

The thesis template has a file "references.bib" you can use to manage your bibliographic references. This file is in the BibTeX format.
`https://en.wikipedia.org/wiki/BibTeX`

You can populate this file by searching on Google Scholar or MathSciNet and clicking on the "cite" link below a search result to get the proper BibTeX-formatted entry.

Entries in file can then be referenced in your paper using the `\cite` command.

Focus on the content of your paper!!!