My 274L Lab Report

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Abstract

This is where I will give a brief introduction to my experiment and summarize the results.

1 Introduction

This is where you can write the introduction to your experiment.

To start a new paragraph just start on a new line like this and TEX will handle all of the details. LATEX is great at managing bibliographic references. Say I wanted to cite this paragraph [1]. Now look in the bibliography

Here is a citation to the laser bible [2]. You can add as many bibliographic references as you like. For more advanced bibliography options you can check out an add-on called BibTEX.

It is best to edit your LATEX files in a TEX friendly editor. For windows I would recommend Crimson editor, and for Mac TEXShop. Both of these are free to download just like the entire TEX typesetting system

2 Procedure/Method

If I wanted to use a numbered list in this sections I would do it like this:

1. This is the first item
2. An example of an inline is that of a line equation of a line is $y = mx + b$.
3. Notice that inline equations do not have numbers
   (a) You can even make lists within lists like this
   (b) And you can nest as many layers as you like

4. Just make sure that if you use a "begin" tag you use a corresponding "end" tag as well

3 Theory

There are three ways to include equations in a document.

1. The first is inline equations as demonstrated above with single dollar signs

2. Using double dollar signs puts equations on their own line like

$$e^{i\theta} = \cos(\theta) + i\sin(\theta)$$

3. This can also be accomplished with and equation block

$$\vec{F} = \frac{d\vec{p}}{dt} = m\vec{a} \tag{1}$$

4 Data & Calculations

The label tags that you see throughout this file can be used to refer to things later in your text such as Section 1 or Equation 1 and LaTeXwill take care of all of the numbering automatically.

It is simple to include data tables using this as a guide:

Table 1: Beam characteristics

$\lambda(\mu\text{m})$	$f_2(\text{mm})$	$\omega(\mu\text{m})$	$\tau_{error}(\text{fs})$
1.0	61.38	146	59.1
1.5	62.60	150	59.3
2.0	63.00	152	59.8
2.5	63.18	154	60.3
3.0	63.28	156	61.1
3.5	63.34	158	62.0
4.0	63.38	161	63.0
4.5	63.41	164	64.0

And Images are inserted in almost the same way. LaTeX can take almost any kind of graphic files such as .jpg .png .gif .pdf .eps .tif Uncomment the following code and insert the name of a graphics to use it in your document. Replace the word filename with the actual image filename. The file extension is not

needed. LaTeX may not always typeset images in exactly the location you specify but will try to fit it into your document to most effectively use page space.

5 Conclusion

A subsection

You can also have subsections within sections if you need them. Notice that the star after the subsection tag suppresses the numbering of the subsection.

Another subsection

There are many more ways to organize text in LaTeX. The possibilities are almost endless. Look around the internet for tutorials on how to use advanced features.

One good place to look is `http://en.wikibooks.org/wiki/LaTeX`

also my LaTeXbookmarks `http://del.icio.us/hadmack/latex`

References

[1] Some Author, Some Book, (2005) pp.45-47

[2] A.Siegman. *Lasers*. University Science Books, Sausalito, CA, 1986