

L^AT_EX Course Handout

Mac Mason
mac@cs.hmc.edu

February 17, 2006

Schedule

- *Week 1*
Introductory Stuff, Installation, Basic Math
- *Week 2*
Fancier Math, Graphics, Tables, etc.
- *Week 3*
References, Bibliographies, Document Classes, etc.
- *Week 4*
Fancy Stuff! Slides, Diagrams, Fonts, maybe some programming...

Resources

On the web:

- <http://www.cs.hmc.edu/mac/latexcourse>
- <http://www.cs.hmc.edu/qref/latex/qref>
- <http://www.math.hmc.edu/computing/support/tex>

Tutorials:

- *The Not-so-short Guide to L^AT_EX₂ ϵ* (posted on the website)

Books:

- *Math into L^AT_EX*
- *The L^AT_EX Companion*

E-mail:

- latex-1@hmc.edu

Code for example.tex

```
\documentclass[10pt]{article}
\title{An Example}
\author{Mac Mason}
\begin{document}
\maketitle
\section{Introduction}
Four score and seven years ago, our forefathers
brought forth on this continent a new nation\ldots
\subsection{Materials Used}
To begin, we used the following materials:
\begin{itemize}
\item One fish
\item Two fish
\item Red fish
\item Blue fish
\end{itemize}
Later in the process, we realized we'd also need an equation.
\begin{equation}
\int_a^b f(x)dx = F(b) - F(a)
\end{equation}
\end{document}
```

Code for example2.tex

```
\documentclass[10pt]{article}
\title{Another Example}
\author{Mac Mason}
\begin{document}
\maketitle
\section{Introduction}
Four score and seven years ago, our forefathers
brought forth on this continent a new nation\ldots

And then, they also brought forth a second paragraph, which looked
like this, and continued well onto a second line so that it might be
clearer what would come to pass.
\subsection{Materials Used}
This time, we didn't use any materials.
Later in the process, we realized we'd also need a different equation.
\begin{equation}
\chi = \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{n}
\end{equation}
\end{document}
```

An Example

Mac Mason

February 16, 2006

1 Introduction

Four score and seven years ago, our forefathers brought forth on this continent a new nation. . .

1.1 Materials Used

To begin, we used the following materials:

- One fish
- Two fish
- Red fish
- Blue fish

Later in the process, we realized we'd also need an equation.

$$\int_a^b f(x)dx = F(b) - F(a) \tag{1}$$

Another Example

Mac Mason

February 17, 2006

1 Introduction

Four score and seven years ago, our forefathers brought forth on this continent a new nation. . .

And then, they also brought forth a second paragraph, which looked like this, and continued well onto a second line so that it might be clearer what would come to pass.

1.1 Materials Used

To begin, we used the following materials:

- One fish
- Two fish
- Red fish
- Blue fish

Later in the process, we realized we'd also need a different equation.

$$\chi = \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots + \frac{1}{n} \tag{1}$$

Installation

Windows

You'll need two pieces of software: "MiKTeX" and "TeXnicCenter".

MiKTeX is available from <http://www.miktex.org/Setup.aspx>. Download the setup wizard, select the "Download only" option the "Small" package set. When it asks you where to put the "Local package repository", don't make the mistake I did and put it on your desktop. Make a temporary folder and put it there. (Otherwise, you'll get a lot of files filling up your screen)

It will take a few minutes to download everything; there's quite a bit of data. Once that's done, re-run the setup program, but select the "Install from local" option. Stick with all the defaults, because they'll work ust fine.

Once that's done, you need to download TeXnicCenter. It's available from http://www.toolscenter.org/front_content.php?idcat=50. The first time you run it, it will ask you if you want to configure TeXnicCenter for use with MiKTeX. The answer is yes. Skip the "Postscript Viewer" options. From the pulldown menu in the middle of the window, select the LaTeX => PDF option; you probably don't want to compile to anything else. The commands to compile your code are in the "Build" menu.

Mac OS

You want a system called "TeXShop". It's available as a .dmg file at <http://www.ctan.org/get?fn=/systems/mac/mactex/MacTeX-20060213.dmg>, and installation should be as easy as double-clicking.

UNIX

You almost certainly already have L^AT_EX installed. Try running `pdflatex` from the command line; if that works, you're done.

If not, you should take a look at your particular flavor's documentation to figure out how to install software. The package you want is probably called "teTeX", or something very similar.

Then, use your favorite text editor. Users of `vim` should look into `LaTeX-Suite`, available from <http://vim-latex.sourceforge.net>. `emacs` users should look into `AuCTeX`, available from <http://www.gnu.org/software/auctex/>.