

So, you are running Mac OS X* and want to try \LaTeX ?

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Before anything else, of course, you need the (free) software and there is no question that you want \TeX Shop. (For why, see the APPENDIX.)

1. You need to *download* two files: \TeX Shop.dmg and II2.dmg. Go to:

<http://www.uoregon.edu/~koch/texshop/texshop.html>

In the section called **Obtaining \TeX Shop and TeXLive-teTeX**—don't worry about what they are, you will find about one-third of the way down the page four download buttons.

- [Latest \$\TeX\$ Shop](#) for system 10.2 and above (8 MB)
- [\$\TeX\$ Shop 1.19](#) for system 10.1.5 and lower (1.1 MB)
- [II2.dmg](#), Gerben Wierda's latest i-Installer from The Netherlands (2.1 MB)
- or [II2.dmg \(TUG mirror, FTP\)](#) the same installer from a mirror at TUG (2.1 MB)

a. Click on [Latest \$\TeX\$ Shop](#). Your browser should take over and, eventually, Mac will ask you where you want to put the file `texshop.dmg`. Put it anywhere you want, it doesn't matter.

b. Click on either one of the two choices for `II2.dmg`. It does not matter which other than one might be faster than the other. (However, I am advised that the size of the i-installer packages might make it problematic to download for people with dial-in connections.) Put `II2.dmg` anywhere you want.

2. Now, from the two `dmg` files you just downloaded, you need to *install* two pieces of software—never mind what they *are*.

a. To *install* \TeX Shop, open the `dmg` file and drag \TeX Shop to the Applications folder. Even though that's it, it is best to do one more thing right now.

*version 10.2 and higher

Open the folder "to your Library" and find the folder "texmf" inside it. Drag this "texmf" folder to the Library folder in your home directory. You are done installing the first piece and you can trash the dmg.

b. To *install* i-Installer, open the dmg and drag i-Installer to the Utilities folder inside the main Applications folder. But the i-Installer is just that, an application that will install the rest of the software you need. It will do so *automatically* which is good because, right now, you really don't want to know more than you have to.

c. So, start i-Installer. Then,

i. Choose the item "Known Packages i-Directory ..." at the top of the "i-Package" menu.

ii. You will see a list of many packages but you are going to install only the following packages, in the following order:

- FreeType 2
- libwmf
- libiconv (on System 10.2 [Jaguar]; skip this on System 10.3 [Panther])
- Ghostscript 8
- ImageMagick
- FontForge
- TeX

To install a package, say "FreeType 2", double click the package name. A window will open. Click the tab, at the top left of the window, named either **Install** or **Install & Configure**. A window will appear asking you to type an Administrator password. After you provide the password that you use anytime Mac requires authentication, installation will begin, mostly without you having to do anything. For some packages, though, you will be asked a few questions during the installation but just choose the **default** response except when asked to choose paper size: choose **letter** if you are in the US. If you are not, you will know what to choose.

In the package window, the **Readme** tab will automatically switch to **Activity** so keep doing nothing while you watch the package being downloaded over the internet. Then the tab will switch to **Subprocess Output** and keep doing nothing while the package is being "unpacked" and "installed".

The package installed at the end, the T_EX package, is a very large collection of files, fonts, and programs. When installation begins, a dialog appears asking if you want to do a **simple** or an **expert** install. Choose **simple** and keep doing nothing.

d. Finally a dialog will appear notifying you that installation is complete.

Stop doing nothing, trash the dmg file and, believe it or not, you are now ready to create

Your First L^AT_EX Document

1. Double-click T_EXShop. Go **File** > **New**. A window opens. Type the following as given. (L^AT_EX will tell you in due time that it contains errors.)

```
\documentclass[11pt]{book}
% begin PREAMBLE
% begin use packages
\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{pdfsync} % This is an add-on to {\TeX}Shop
% end PREAMBLE
\begin{document} % What follows is what will be typeset.
Let f be the function specified by the Input-Output rule
 $f(x) = ax^2 + 5x - c$ 
A function such as this is called a quadratic function.
\end{document}
```

Note that, as soon as you typed the caret in the formula, T_EXShop obligingly typed a set of curly brackets for you to type the 2 in.

Altogether, here is how what you just typed will look in the T_EXShop window:

```
\documentclass[11pt]{book}
% begin PREAMBLE
\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{pdfsync} % This is an add-on to TeXShop
% end PREAMBLE
\begin{document} % What follows is what will be typeset.
Let f be the function specified by the Input-Output rule
 $f(x) = ax^2 + bx + c.$ 
A function such as this is called a quadratic function.
\end{document}
```

2. Observe the use of colors in the source:

- Anything starting with % is in *red*. These are comments for your own use, say to remember later on why you did what you did and/or whatever it is that you want the code to do. Comments are completely ignored by TeX which is very convenient for debugging—an unfortunate but absolute necessity in L^AT_EX life. To turn text into comment, put the insertion point anywhere *in* the text and go **Format > Comment**.
- Anything in *blue* is, essentially, a command, with *green* curly brackets instead of parentheses to enclose the argument(s).

3. We are now going to try to typeset this.

a. Click the button **Typeset** in the upper left corner of the source window. Mac intervenes to ask you where you want to save it and under what name. Save it as **Try_1**. The window is now called **Try_1.tex** and the reason that we used an underline instead of a space or a dot is that L^AT_EX does not like either one in a file name.

b. But another window, this one called **Try_1 console**, also opened with a lot of stuff in it. Don't even try to read it. The console showing up means that L^AT_EX wants to remonstrate with you about what you wanted it to typeset. In this case, you can see the reason at the bottom of the console but, unfortunately, the console is not always that clear. (A bit more about this in the postface.) Specifically, L^AT_EX saw the caret in the formula $f(x) = ax^2 + bx + c$ and concluded that you had gone in the mathematics writing mode. The trouble, though, was that L^AT_EX had no way of knowing where you started and where you ended doing so. To let L^AT_EX know, type a \$ sign on both sides of the formula: $f(x) = ax^2 + bx + c$.

Notice that, in the source, the \$ signs come out *green* like the curly brackets and for the same reason: both are understood by L^AT_EX as delimiters. Now click again on **Typeset**. Yet another window, this one called **Try_1.pdf**, comes up, *in front* of the console, in which you see

Let f be the function specified by the Input-Output rule $f(x) = ax^2 + 5x - c$. A function such as this is called a quadratic function.

c. Notice that L^AT_EX did typeset the formula as it should be, that is, variables are italicized, the minus sign is a lot larger than what you typed and the parenthe-

ses are *not* italicized. However, the “f” on the first line is not italicized because we forgot to let L^AT_EX know that it too was a mathematical symbol.

d. Rather than surrounding the “f” with \$ signs by hand, we are going to create a **macro**. Go **Macros > Open Macro Editor**. A window comes up called **Macro Editor**. In the box under **Name**, type \$\$_ In the box under **Contents**, type \$#SEL#\$. At the bottom of the window, click **Save**. The window disappears.

e. Now, in the source, select the “f” we need to mark as a mathematical symbol by double-clicking it and go **Macros > \$. \$**.

The “f” is now surrounded by green \$ signs and when you click **Typeset**, the f is now italicized:

Let f be the function specified by the Input-Output rule $f(x) = ax^2 + 5x - c$. A function such as this is called a quadratic function.

Say you want the word “quadratic” to be boldfaced. In the source, click on the word quadratic, then go **Window > L^AT_EX Panel > Typeface > Bold**. Observe that, in the source, the word quadratic is now the argument of the command `\textbf{}`, namely that you now have in the source `\textbf{quadratic}` instead of just quadratic. Click **Typeset** and now you see:

Let f be the function specified by the Input-Output rule $f(x) = ax^2 + 5x - c$. A function such as this is called a **quadratic** function.

POSTFACE. That was, of course, emphatically *not* a tutorial. It was just meant to get you *started*. So, before anything else, read and reread the T_EXShop **Help**. After that, you should consider the **L^AT_EX documentation** recommended on the T_EXShop site in the section by that name.

But what you should really do is to play a bit with the **Latex Panel**, explore the T_EXShop menu, create a few more macros, etc. Be sure to keep typesetting as you go to see the effect of what you are typing.

When you do something the console does not like, go back to the source and keep clicking **Undo** and **Typeset** until L^AT_EX *will* typeset. If it keeps refusing to do so, and you can be sure that sooner or later it will, first try to reset it by clicking the **Trash Aux File** button at the top of the console. Occasionally this will work and it

can't hurt anything. If, though, the console insists, sternly but very opaquely and no matter what you try, that \LaTeX is incapable of typesetting your source, then *that* will be the time when you will want to go to

<http://www.esm.psu.edu/mac-tex/>

in order to register for the **Mac-TeX Mailing List** and cry for help.

APPENDIX. Why \TeX Shop? For the one, simple reason that it is, by far, the most user-friendly.

In the Spring of 2004, when it turned out I had to learn \TeX , the first thing I found out that there were *any* number of choices. It seemed as if you could do *everything* in \LaTeX in *any* number of ways. Beyond belief. This was because \LaTeX being “open” software, everyone can work on it and many do. “Profit motive” be damned. The trouble was that, totally ignorant and used to commercial packages, I was unable to choose intelligently and indeed made some very time-consuming and very frustrating mistakes just trying to *get* the software. The reason for that lack of “direct advice” is that in the \LaTeX community, as in every tight-knit community, people can be fiercely competitive and/or defensive and bystanders usually do not want publicly even to appear to “take sides”. On the other hand, see the acknowledgment below.

Eventually, I came across the \TeX Shop site and *this* was when I finally got started in that at least I had the software. But then, I found that the “introductions” to which I turned were in the usual “pedagogical” mode, starting with a history of \LaTeX , etc, when I could not even typeset “Hello World”.

Finally, from what I read on the Mac-TeX Mailing List, there is an incredible lot to discover. However, I would suggest you do it only after you have acquired a minimal proficiency with \TeX Shop to provide you with a benchmark to understand the other softwares. To me, by the way, the most intriguing one is \XeTeX which works *with* \TeX Shop—whatever *that* means, but which I have not tried. However, I often go to their site,

http://scripts.sil.org/cms/scripts/page.php?site_id=nrsi&item_id=xetex

wistfully to admire their output. I leave you the surprise.

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ACKNOWLEDGMENTS:

- The installation part of this article is taken almost *verbatim*, with permission, from the T_EXShop site.
- Most of what I can do with L^AT_EX I learned from John Peterson, Technical Editor of the *AMATYC Review*, and people on the Mac-TeX Mailing List too numerous to name here. But, without their immense, infinitely patient help, I would have never been able even to come anywhere near the point of being able to *typeset* this very piece.
- Particular thanks must go to Aaron Jackson, from the Mac-TeX Mailing List and Howard University, who created the *facsimile* of the T_EXShop source. Not at all an easy feat.