
Synopsis of Using \LaTeX for maths (ULFM)

S. Parthasarathy
drpartha@gmail.com

ulfmsynopsis.tex
20170909a

It is a well known fact that \LaTeX is eminently suitable for typesetting mathematics and mathematically-rich text. This book gives an overview of the various possibilities offered by \LaTeX and the basic rules for using these features of \LaTeX . For a thorough overview of using \LaTeX for mathematically-rich documents, please take a look at [1] and [2]. Absolute novices to \LaTeX may find it useful to refer to any of the resources mentioned in <http://drpartha.org.in/profpartha/startlatex.htm>

The book promotes the "hack to learn" paradigm, to get you started up quickly to enjoy the beauty and power of \LaTeX . The \LaTeX source is included along with the ebook as a zipped bundle. You can take a look at the \LaTeX sources which were used for making this ebook, and get a feel for how \LaTeX can be used for creating mathematical texts. You can modify the source code and create your own documents according to the "hack to learn" paradigm. The individual chapters are based on courses taught at various institutions, and were published separately earlier.

This ebook was prepared and tested using a Linux system. It will work best with Linux systems only.

True to the spirit of FOSS, this ebook is distributed under a liberal license – Creative Commons licence : <https://creativecommons.org/licenses/by-sa/4.0/legalcode> .

References

- [1] George Gratzer, *Math into LaTeX*,
<ftp://ftp.tex.ac.uk/ctan/tex-archive/info/mil/mil.pdf>
- [2] George Gratzer, *More maths into LaTeX*, Pub. : Birkhauser,
Available from: <http://www.ctan.org/tex-archive/info/mil/mil.pdf>

All the predefined mathematical symbols from the TeX package are listed below. More symbols are available from extra packages. Sections remaining to be done: Table 3 onwards from symbols.pdf (To do). Scott Pakin, The Comprehensive LaTeX Symbol List, 2017. (Lists thousands of symbols and the corresponding LaTeX commands that produce them.) Comprehensive TeX Archive Network. <http://ctan.cms.math.ca/tex-archive/info/symbols/comprehensive/SYMLIST>. "Too many math alphabets used in version normal." I read this thread many times in recent days (as well as many other related threads): "Too many math alphabets" error. In Lars Hellström's reply, Lars says: "We were able to solve the issue by declaring a separate math version for one of the more alphabet-hungry papers." I am embarrassed that this is my first question on StackExchange, despite having using LaTeX for perhaps 20 years! I usually am able to figure things out myself, and I have many friends who use LaTeX (including Don Knuth himself), but I finally got stumped by this one. I guess I am a bit fatigued, and I guess it is rare to manage such a large project in LaTeX. Many thanks (in advance) for any gentle help that can be offered here. — mdw Jun 27 '19 at 9:06. Using LaTeX for maths assignments. LaTeX is the de facto standard software to write mathematical reports. It is an add-on to the famous TeX program by Donald Knuth, and gives it a more friendly face. You can use LaTeX to produce book-quality printed technical material that looks infinitely better than things coming out of Word. The sooner you learn LaTeX, the better. You will need it for various modules, among which Mathematical Modelling II as well as Project III/IV. This page is meant to give you a quick start, and answer some frequently asked questions specific to the modules in Durham. There is loads of additional information on the web; see the links below. (Use of alternative math font sets such as Lucida New Math may ameliorate the situation somewhat.) default \mathbf \mathsf \mathit \mathcal \mathbb \mathfrak . XX X X X X. The \boldsymbol command is obtained preferably by using the \mathbf package, which provides a newer, more powerful version than the one provided by the \mathbf package. Generally speaking, it is ill-advised to apply \boldsymbol to more than one symbol at a time. Short Math Guide for LATEX, version 1.09 (2002-03-22) 3.18.1. Calligraphic letters (\mathcal ; no lowercase) Usage: \mathcal{M} . Abcdefghij klmn opqrst uvwx yz.