LaTex Manual

1) First get the LaTeX style file (the style file written for the LaTeX should not be modified) and a sample file for LaTeX via e-mail or web site. Install them into the new folder prepared for the manuscripts. Make a copy of sample file and give it an appropriate name (remembering to add the suffix "tex"). The content of this file will change and a new manuscript can be made. The original should be stored for future use. Only the space between "{ }" should be rewritten with the manuscript title, author's name, keywords, and the document. The English letters prefixed "¥" should not be modified as they are the LaTeX commands.

2) After editing the file with the name xxxx.tex, compile it by LaTeX or jLaTeX (use pTeX or OzTeX).

- For example, the following command strings should be used in the unix base:

  latex **xxx.tex** or jlatex **xxxx.tex**: for compilation.
  xdvi **xxx.dvi**: for preview.
  dvi2ps **xxxx.dvi**l lpr: for printing out after converting into the post-script (ps) file.

  When the compilation is complete, a total of three (3) files are generated. They are: **xxxx.dvi** (**=**device-independent file which includes the information after compilation), **xxxx.aux**, and **xxxx.log**. The manuscript can be displayed on a monitor screen using the preview command: **xxxx.dvi**.

- **Major Commands**

  The LaTeX commands start with the mark ¥. Space between "¥begins{document}" and "¥end{document}" is the effective area for document. If the commands are not matched, "compiler error" appears. Watch out for misspellings. Command names are different if it is written by lower-case letters in place of capital letters.

  ¥¥ ---Means Forced Line Change.
  An empty line is regarded as the end of a paragraph.

  ¥it --- Converts the letter to italic.
  ¥bf ---Converts the letter to bold.
  ¥it{---} ---Converts the letters inside of {} to italic.

  % Comments may be written after the % sign.
  ¥% ---Prints the "%" sign itself, and ¥ is used to escape from LaTeX commands.

  ¥begin{document} .... ¥end{document} are essential commands. The main sentence should be written in the between these two commands.

  ¥title{} ---A title may be created within the "{}".
  ¥author{} ---The authors name should be written between the "{}".

  ¥maketitle is to produce the title.
  ¥begin{tabular}... ¥end{tabular} is for making tables.

  $...$ is for producing simple equations. It can also be used to make suffixes.
  All letters written inside $...$ will appear in italic letters as default.
  ${...}$ converts the letter inside { } from italic back to straight font .....${¥rm{^{3}He}}$

  For example:

a_{1} makes subscript 1 for a.
a^{2} makes superscript 2 for a.
Greek letters can be produced by spelling it out like ¥alpha.

To produce independent numerical formula, use the following sequence:

¥begin{equation}
numerical formula
¥end{equation}

- **Trouble Shooting (for unix base)**:

  1) The most frequently encountered error is the misspelling of command and/or mismatch: e.g., "$.....$" or "¥begin{}.....¥end{}".

  2) Examples of Compilation Errors:

  Prompt stops with the mark of "?"
  --- This can be solved by Ctrl+d, and x or q.

  Please type another input file name:
  --- File can not be found. Misspelling? No style file is specified yet. This can be solved by Ctrl+d.

  ! Missing $ inserted ....?
  ---Mismatch of the number of $. Equations have to be sandwiched by "$....$". To print out the $ itself, type ¥$.

  !Emergency stop.....1.19

  --- An error exists around the 19th line.

  !Undefined control sequence.
  1.30¥fotnotetext.
  --- The 30th line "¥fotnotetext" should be corrected as "¥footnotetext".

- For more detailed information please consult the appropriate reference books, listed below.
- **Reference Books**
  - 1) D. E. Knuth: The TEXbook (Addison-Wesley, Reading, 1984)
    2) L. Lamport: LATEX: A Documant Preparation System (Addison-Wesley, Reading, 1986)
    3) R. Seroul and S. Levy: A Beginner's Book of TEX（Springer, New York,1989)
    4) S. von Bechtolsheim: Tex in Practice, Vol.1-4 (Springer, New York,1993)
    5)G. Gratzer: Math into TEX- A Simple Introduction to AMS-LATEX (Birkhauser, Boston,1993) TeX Unbound : LaTeX & TeX Strategies for Fonts, Graphics, & More by Alan Hoenig, Oxford Univ Press, Published 1998.

Information regarding LaTeX Software

Please refer to the www sites below.

(1)pTeX:

http://macptex.appi.keio.ac.jp/~uchiyama/macptex.html

http://www.fsci.fuk.kindai.ac.jp/kakuto/win32-ptex/

http://www.ascii.co.jp/pb/ptex/

(2) OzTeX:

http://www.trevorrow.com/oztex/index.html