An Example of the Tufte-Handout Style[1]

[1] Inspired by Edward Tufte!

The Tufte-LaTeX Developers

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This document describes the Tufte handout LaTeX document style. It also provides examples and comments on the style's use. Only a brief overview is presented here; for a complete reference, see the sample book.

1 *New Features*

1.1 *Color Showcase*

The Tufte-LaTeX document classes defines a number of colors. It uses these colors for links, citations, sections, and other elements. The `xcolor` package defines the colors. Users can use these colors in their own documents, or redefine them. Here are the colors available in the Tufte-LaTeX document classes:

`tufte-black`		`tufte-grey`	
`tufte-red`		`tufte-pastel-red`	
`tufte-orange`		`tufte-pastel-orange`	
`tufte-yellow`		`tufte-pastel-yellow`	
`tufte-green`		`tufte-pastel-green`	
`tufte-blue`		`tufte-pastel-blue`	
`tufte-purple`		`tufte-pastel-purple`	

1.2 *Note Environments*

Tufte-LaTeX provides two environments for notes. The **ShadedNote** environment provides a shaded background. The **FramedNote** environment places a frame to the left of the note. Both environments use the same counter as they are similar and it doesn't make sense to separate them.

Note 1. *This is an example of the `ShadedNote` environment. It provides a shaded background for the note text. The note text can be long or short.*

Note 2 (*Note Title*)

This is an example of the `FramedNote` environment. It provides a framed box to the left of the note text. The note text can be long or short.

If you label an note, you can reference it using the `\cref` command. For example, Note 2 showcases the **FramedNote** environment. You can also use the ⟨*continues*⟩ option to continue an note:

Note 2 (*continuing from p. 1*)

This is a continuation of the previous note. It will be displayed in a new frame, but will have the same label, title, and number.

To use them in your own documents, you need to define the environments using:

```
\begin{ShadedNote}[
  title={Optional title},
  label={Optional label},
  continues={Optional label}
  ]
  Note text here
\end{ShadedNote}
```

2 Section Example

2.1 Subsection Example

Paragraph Example

3 Tufte-LaTeX Design

The Tufte-LaTeX document classes define a style similar to the style Edward Tufte uses in his books and handouts. Tufte's style is known for its extensive use of sidenotes, tight integration of graphics with text, and well-set typography. This document aims to be at once a demonstration of the features of the Tufte-LaTeX document classes and a style guide to their use.

4 Page Layout

4.1 Headings

This style provides A- and B-heads (that is, `\section` and `\subsection`), demonstrated above.

The Tufte-LaTeX classes will emit an error if you try to use `\subsubsection` and smaller headings.

In his later books,[2] Tufte starts each section with a bit of vertical space, a non-indented paragraph, and sets the first few words of the sentence in small caps. To accomplish this using this style, use the `\newthought` command:

```
\newthought{In his later books}, Tufte starts...
```

[2] Tufte 2006.

4.2 Sidenotes

One of the most prominent and distinctive features of this style is the extensive use of sidenotes. There is a wide margin to provide ample room for sidenotes and small figures. Any `\footnotes` will automatically be converted to sidenotes.[3] If you'd like to place ancillary information in the margin without the sidenote mark (the superscript number), you can use the `\marginnote` command.

[3] This is a sidenote that was entered using the `\footnote` command.

This is a margin note. Notice that there isn't a number preceding the note, and there is no number in the main text where this note was written.

The specification of the `\sidenote` command is:

`\sidenote[`⟨*number*⟩`][`⟨*offset*⟩`]{`*Sidenote text.*`}`

Both the ⟨*number*⟩ and ⟨*offset*⟩ arguments are optional. If you provide a ⟨*number*⟩ argument, then that number will be used as the sidenote

number. It will change of the number of the current sidenote only and will not affect the numbering sequence of subsequent sidenotes.

Sometimes a sidenote may run over the top of other text or graphics in the margin space. If this happens, you can adjust the vertical position of the sidenote by providing a dimension in the ⟨*offset*⟩ argument. Some examples of valid dimensions are:

```
1.0in    2.54cm    254mm    6\baselineskip
```

If the dimension is positive it will push the sidenote down the page; if the dimension is negative, it will move the sidenote up the page.

While both the ⟨*number*⟩ and ⟨*offset*⟩ arguments are optional, they must be provided in order. To adjust the vertical position of the sidenote while leaving the sidenote number alone, use the following syntax:

```
\sidenote[][⟨offset⟩]{Sidenote text.}
```

The empty brackets tell the `\sidenote` command to use the default sidenote number.

If you *only* want to change the sidenote number, however, you may completely omit the ⟨*offset*⟩ argument:

```
\sidenote[⟨number⟩]{Sidenote text.}
```

The `\marginnote` command has a similar *offset* argument:

```
\marginnote[⟨offset⟩]{Margin note text.}
```

4.3 References

References are placed alongside their citations as sidenotes, as well. This can be accomplished using the normal `\cite` command or the `\autocite` command, which functions similarly.[4]

You will need to specify a bibliography resource file in the preamble of your document using `\addbibresource`. The complete list of references may also be printed automatically by using the `\printbibliography` command. See the end of this document for an example, and the BibLaTeX documentation for more information.

To enter multiple citations at one location,[5] you can provide a list of keys separated by commas: `\cite{Tufte2006,Tufte1990}`.

```
\cite{bibkey1,bibkey2,...}
```

[4] If you use the `\cite` command within a sidenote, it will render as an in-line parenthetical citation, as demonstrated here (Tufte 2001).

[5] Tufte 1990, 2006.

5 Figures and Tables

Images and graphics play an integral role in Tufte's work. In addition to the standard **figure** and **tabular** environments, this style provides special figure and table environments for full-width floats.

Full page–width figures and tables may be placed in **figure*** or **table*** environments. To place figures or tables in the margin, use the **marginfigure** or **margintable** environments as follows (see figure 1):

```
\begin{marginfigure}
  \includegraphics{helix}
  \caption{This is a margin figure.}
\end{marginfigure}
```

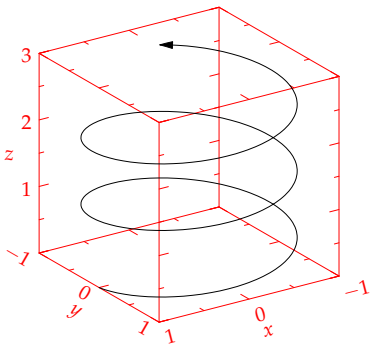

Figure 1: This is a margin figure. The helix is defined by $x = \cos(2\pi z)$, $y = \sin(2\pi z)$, and $z = [0, 2.7]$. The figure was drawn using Asymptote (`http://asymptote.sf.net/`).

The **marginfigure** and **margintable** environments accept an optional parameter ⟨*offset*⟩ that adjusts the vertical position of the figure or table. See the "Sidenotes" section above for examples. The specifications are:

```
\begin{marginfigure}[⟨offset⟩]
    ...
\end{marginfigure}

\begin{margintable}[⟨offset⟩]
    ...
\end{margintable}
```

Figure 2 is an example of the `figure*` environment and figure 3 is an example of the normal `figure` environment.

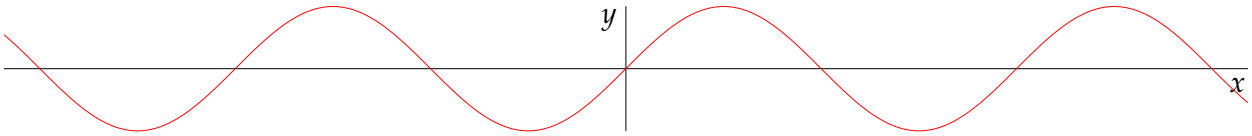

Figure 2: This graph shows $y = \sin x$ from about $x = [-10, 10]$. *Notice that this figure takes up the full page width.*

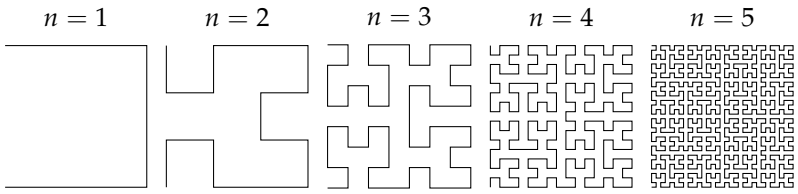

Figure 3: Hilbert curves of various degrees n. *Notice that this figure only takes up the main textblock width.*

Table 1 shows table created with the `booktabs` package. Notice the lack of vertical rules—they serve only to clutter the table's data.

Margin	Length
Paper width	8½ inches
Paper height	11 inches
Textblock width	6½ inches
Textblock/sidenote gutter	⅜ inches
Sidenote width	2 inches

Table 1: Here are the dimensions of the various margins used in the Tufte-handout class.

6 *Full-width text blocks*

In addition to the new float types, there is a **fullwidth** environment that stretches across the main text block and the sidenotes area.

```
\begin{fullwidth}
Lorem ipsum dolor sit amet...
\end{fullwidth}
```

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

7 Typography

7.1 Typefaces

If you're using XeLaTeX or LuaLaTeX, the class will use ETbb as the main typeface if the `etbb` package is installed and TeX Gyre Pagella otherwise; TeX Gyre Heros, and `TeX Gyre Cursor` are the default for sans-serif and monospace text, respectively. (The TeX Gyre faces are usually included with TeX Live distributions.) In these cases, the class automatically loads the `fontspec` package, so you can easily select your own system fonts. Under pdfLaTeX, the class defaults to the Palatino, Helvetica, and `Bera Mono` typefaces if they're installed. Otherwise, we'll fall back on the Computer Modern typefaces.

7.2 Letterspacing

This document class includes two new commands and some improvements on existing commands for letterspacing.

When setting strings of ALL CAPS or SMALL CAPS, the letterspacing—that is, the spacing between the letters—should be increased slightly.[6] The `\allcaps` command has proper letterspacing for strings of FULL CAPITAL LETTERS, and the `\smallcaps` command has letterspacing for SMALL CAPITAL LETTERS. These commands will also automatically convert the case of the text to upper- or lowercase, respectively.

[6] Bringhurst 2005.

The `\textsc` command has also been redefined to include letterspacing. The case of the `\textsc` argument is left as is, however. This allows one to use both uppercase and lowercase letters: The Initial Letters Of The Words In This Sentence Are Capitalized.

8 Installation

To install the Tufte-LaTeX classes, simply drop the following files into the same directory as your `.tex` file:

```
tufte-book.cls
tufte-common.def
tufte-handout.cls
tufte.bst
```

9 More Documentation

For more documentation on the Tufte-LaTeX document classes (including commands not mentioned in this handout), please see the sample book.

10 Support

The website for the Tufte-LaTeX packages is located at `https://github.com/Tufte-LaTeX/tufte-latex`. On our website, you'll find links to our SVN repository, mailing lists, bug tracker, and documentation.

11 References

Bringhurst, Robert (2005). *The Elements of Typography*. 3.1. Vancouver, British Columbia: Hartley & Marks. ISBN: 0-88179-205-5 (cit. on p. 5).

Tufte, Edward R. (1990). *Envisioning Information*. Cheshire, Connecticut: Graphics Press. ISBN: 0-9613921-1-8 (cit. on p. 3).

– (2001). *The Visual Display of Quantitative Information*. Cheshire, Connecticut: Graphics Press. ISBN: 0-9613921-4-2 (cit. on p. 3).

– (2006). *Beautiful Evidence*. First. Cheshire, Connecticut: Graphics Press, LLC. ISBN: 0-9613921-7-7 (cit. on pp. 2, 3).