Some Really Great Title That Provides a Concise View of the Topic Your Thesis Will Address

A Dissertation submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Engineering

by

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COLLEGE OF GRADUATE STUDIES

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I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY Johnny B. Goode ENTITLED Some Really Great Title That Provides a Concise View of the Topic Your Thesis Will Address BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF Master of Science in Engineering.

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Committee member 7

ABSTRACT

Goode, Johnny. M.S.Egr., Department of Lollipops, Wright State University, 2013. *Some Really Great Title That Provides a Concise View of the Topic Your Thesis Will Address.*

The abstract should succinctly summarize the contents of the thesis, stating the problem, the procedure or methods used, the results, and any conclusions. Doctoral dissertation abstracts should not exceed 350 words. Master's thesis abstracts should not exceed 150 words.

List of Symbols

Chapter 2

γ	$\frac{-b+\sqrt{b^2-4ac}}{2a}$
L	Plate length

Chapter 3

h	Plate thickness
L	Plate length

Chapter 4

M_∞	Freestream Mach number
U_∞	Freestream fluid velocity
$p - p_\infty$	Aerodynamic pressure differential

Chapter 7

β	$\sqrt{M_\infty^2 - 1}$
λ	Nondimensional freestream dynamic pressure

Contents

List of Figures

List of Tables

Acknowledgment

I would like to take this opportunity to extend my thanks to. . . If you have multiple paragraphs, the first should not be indented to match the style of the rest of the thesis

Any additional paragraphs should be indented as such. Remember to thank your advisor and committee members.

Dedicated to

Somebody special (Wife, husband, girlfriend or boyfriend works well here.)

In The Beginning

The date of this document generation (current version of this document) is the date of the thesis on page two (September 17, 2016). sdafsd sadfsdaf asdfadf. OK, I have nothing to say here, but you should in your thesis/dissertation. Introduce your chapter in a page or so.

On a side note, style files should be located in the texmf tree automatically when a package is installed. The sty-files used for this template are located in the folder "sty_files_if_needed". If you do not have the packages already installed, you can also simply move or copy them into the same directory as this file.

1.1 Citations, using them, referring to them, formatting them, and loving using them because if you don't use them when appropriate it's called *plagiarism*, and references

That was a ridiculously long section name to illustrate how to get a shorter version in your table of contents.

See section 1.1.2. I'm not the only one who says this is awesome stuff[2]! This citation is in the ASME format (for which I've included a bst file. See ASMEMS4 in the

source document(way near the end). Some other options are:

- natbib: put `\usepackage{natbib}` in the header (before `\begin{document}`), and `\bibliographystyle{plainnat}` just before `\bibliography`). See the natbib documentation for details.

- AIAA: put `\usepackage{overcite}` in the header (before `\begin{document}`), and `\bibliographystyle{aiaa}` just before `\bibliography`). Use `\citen{sdfsdf}` for in-line citations. Read the overcite package documentation for more.

A variety of other formats are available on CTAN or though an internet search. You may also just pick one using "natbib".[1] The formatting of your references is controlled by the `bibliographystyle` command near the end of the document. Use the bibliography style appropriate to your field. On exists, out there. I'm sure. If not (ok, it happened to me 10 years ago), you can use the `makebst` script to make your own. Answer a bunch of questions and it makes a style file for you. If you are using a numerical citation system, you may want to use `\usepackage{cite}`. It creates a condensed numerical list of citations, but can cause conflicts with the `hyperref` package (you may need to decide... sorry, this is a bug that drives me nuts too.)

1.1.1 About the Bibliography

There are two lines in this section in your LaTeX file. The first is a bibligraphystyle command (see the tex file. Don't move it elsewhere. It won't work out well for you.

You need to choose a style file that formats references the way you want them formatted. You should chose a style for your major. Look for bst styles on ctan, or use makebst.sty. This formats the bibliography. The last line is the bibliography command. It just tells LaTeX the name of your .bib file. This is a database of your references.

[1] Don't those quotes look bad before "natbib"? Well, use two left quotes in LaTeX to get it to look right.

Also, use the `\phantomsection` command to correctly anchor the hyperlink for the bibliography. Without this, any hyperlinks in the document, and the link from the bookmarks will take you to the incorrect page.

You can have as many sources listed in the *.bib file, but if you do not cite them in your document, they will not show up in your Bibliography. And if you do, they automatically are sorted... pretty nice!

1.1.2 Equations

$$x = \frac{\alpha}{\beta} \tag{1.1}$$

Really bad idea: don't start a section with an equation. Don't start a sentence with a variable either. Start with a word. In the body of the text, use the $ around the variable. For example, the variable x is the distance. How hard was that?

Sometimes you don't want an equation number, so use `{equation*}` instead.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

If you need to align a set of equations up use the `align` command instead with the use of the & to set the anchor

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{1.2}$$

$$x = \frac{\alpha}{\beta} \tag{1.3}$$

The same applies for the `align` command... if you don't want equation numbers, just use an *. More can be found at the references listed in Section 2.3. You can easily make matrices such as the viscous damping matrix, C_d, which is shown in Equation (1.4). Use

the `\eqref{eq:\ldots}` command to reference equations properly.

$$C_{da} = [U_n^T]^{-1} \begin{bmatrix} a & b & c \\ \ddots & & \\ & 2\zeta_i\omega_i & \\ & & \ddots \end{bmatrix}^{-1} [U_n]^{-1} \tag{1.4}$$

We don't number equations in LaTeX. LaTeX does it for us. Label them with names (see the raw LaTeX file). Just don't put a space in the middle of a variable name.

Now if I have an equation that I want to be between paragraphs, unlike equation (1.1), I put a blank line after the equation.

$$x \neq y \tag{1.5}$$

See indent? But if I'm continuing the paragraph, don't put that blank line in

$$x \neq y \tag{1.6}$$

and there won't be an indent.

If you want a new page and you have a figure you want to stay with the section, you need to use the `\clearpage` command instead of the `\newpage` command.

1.2 Figures

This is not the same as section 1.1.2 on equations. However, if I move that section, I'll still be referring to the right section. Better explained by Figure[2] 1.1. You can keep all of your figures in a sub-directory such as "pix", which is used in this template.

[2] a) Don't use footnotes. b) Capitalize the word "Figure")

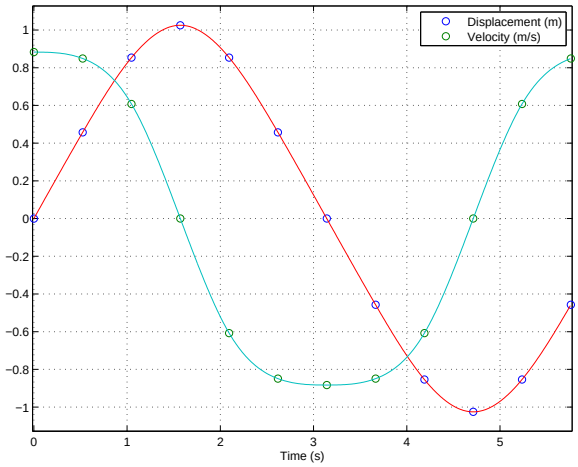


Figure 1.1: Example caption.

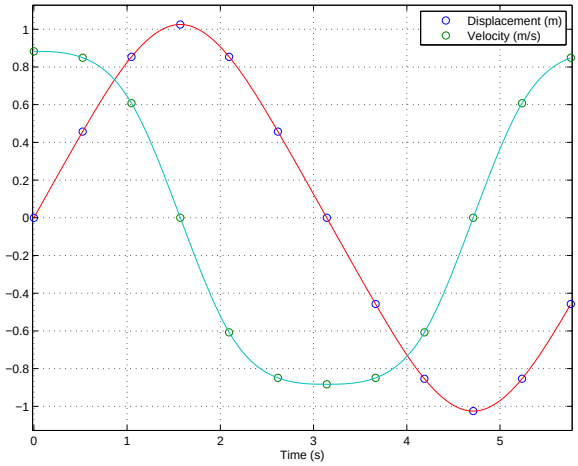


Figure 1.2: Example caption that is way too long for the list of figures, is a run on sentence, has no purpose being this long, except to show you how to avoid such a crazy long entry in your list of figures.

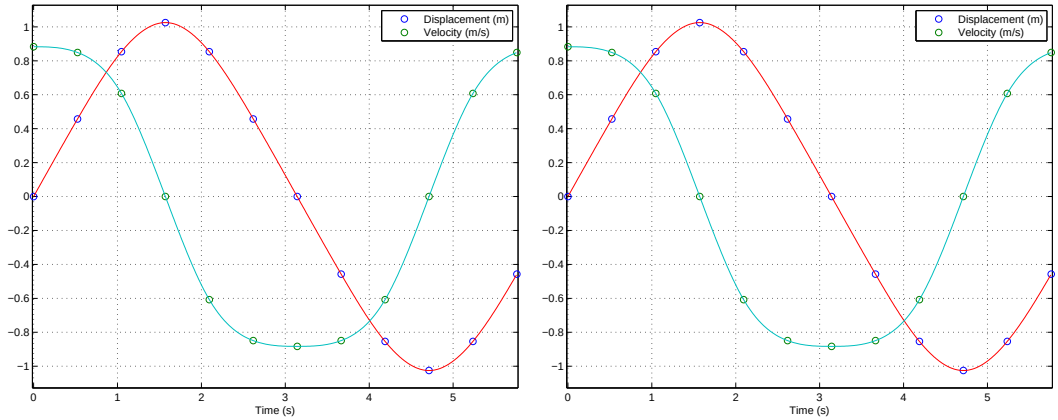
The width of the figure can be set based on percentage of text width as set in Figure 1.1 or based on inches as used in Figure 1.2. Also notice the `\label` is after the `\caption`. This must be true, or the hyperlinks and figure numbers will not be correct.

Don't ask me why the label command has to come late in a figure. It does. Remember, color won't print well in black and white. Use dashes and dash-dots, etc, for hard copies. I'll document a trick for this later. Basically, make two graphics directories, one for color, one for black and white. Then, use the graphicspath command to choose the one you

want. You can Google this for now.

1.3 Sub-figures

You can also make sub-figures and reference each of them individually. You can reference the entire Figure 1.3, or just Figure 1.3(a) or Figure 1.3(b).



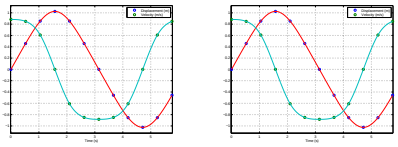
(a) First sub-figure (b) Second sub-figure

Figure 1.3: Side-by-side sub-figures.

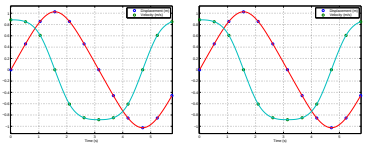
If you want 4 total figures, just add a line break, `\\`, after the second sub-figure as shown in Figure 1.4. You can add spacing between them with the `\quad` or `\qquad` commands. There is more space between Figures 1.4(a) and 1.4(b) to show the use of this spacing. Make sure all of your spacing is equal. And don't make your figures this small. As my advisor told me, "old people read these" [1].

1.4 Including Chapters or Files

You can include chapters using the `\include` command. See the LaTeX file. Each file can be included separately as to keep editing localized to each chapter.



(a) First sub-figure (b) Second sub-figure



(c) Third sub-figure (d) Fourth sub-figure

Figure 1.4: 2x2 sub-figures.

You can also use the `\input` command to include items without forcing a page break. This becomes handy when generating a table, you can leave the reference in the main document and the table can be updated separately.

Table 1.1: Complete test matrix of waveforms for experimental bench test

Bandwidth (Hz)	**FFT lines**	**Samples/Cycle Chirp**	**Frequency Resolution** (mHz)	**Sweep Rate** (mHz/sec)	**Sweep Time** (sec)
8	100	3-10, 20	80	0.64	12.5
	200	3-10	40	0.32	25
	400	3-10	20	0.16	50
16	100	3-10, 20, 50	160	2.56	6.25
	200	3-10, 20	80	1.28	12.5
	400	3-10, 20	40	0.64	25
	800	3-10	20	0.32	50
32	100	3-10, 20	320	10.24	3.125
	200	3-10, 20	160	5.12	6.25
	400	3-10, 20	80	2.56	12.5
	800	3-10, 20	40	1.28	25
	1600	3-10	20	0.64	50

Using the `booktabs` package makes very professional looking tables by varying the thickness of the lines which can be customized.

1.5 Inserting Code

If you want to insert code you can use the `mcode` package. You can choose to between several options to frame, have numbered lines , automatic line breaks and more. Below is an example of listing a MATLAB® m-file.

```
%import text file for input data
clear
clc
fid=fopen('textscanTEST.txt');
fileimportdata=textscan(fid,'%s%s',...
                                'commentStyle', '%')
fclose(fid)
```

Typesetting Programs using LaTeX

2.1 Windows

Below are some programs for Windows:

- MiKTeX

  - Up-to-date implementation of TeX

  - Side-by-side comparison of source and PDF

  - Has portable version that can be run from portable storage device

- LyX

  - Graphical interface used with TeXand LaTeX

- TeXLive (also Unix)

- proTeXt

2.2 Mac OS

Below are some programs for Mac OS:

- LyX

- MacTEX

    - TEXLive with the addition of Mac specific programs

- gwTEX(Mac OS X)

- Latexian (Mac OS X)

2.3 References

- CTAN home page

- Wikibooks LATEX home page

Bibliography

[1] J.F. Mark. Analytical and experimental vibration analysis of variable update rate waveform generation. Master's thesis, Wright State University, 2011.

[2] S A Mortara, J C Slater, and P S Beran. Analysis of nonlinear aeroelastic panel response using proper orthogonal decomposition. *Journal of Vibration and Acoustics-Transactions of the ASME*, 126:416–421, JUL 2004.

Appendix A

An Example

Here is an appendix... not too difficult.

Appendix B

Another Example

Again. . . not too difficult.