HOWARD UNIVERSITY

Howard University Thesis Template

A Dissertation
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Department of Mechanical Engineering

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HOWARD UNIVERSITY
GRADUATE SCHOOL
DEPARTMENT OF MECHANICAL ENGINEERING

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Date of Defense: April XX, 2021

DEDICATION

A great dedication goes here.

ACKNOWLEDGEMENTS

I acknowledge people...

ABSTRACT

TBD

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LIST OF ABBREVIATIONS

A | F | P

A

ABS acrylonitrile butadiene styrene.

F

FFF fused filament fabrication.

P

PB polybutadiene.

LIST OF SYMBOLS

H

H

$H+$ hydrogen ion.

CHAPTER 1. INTRODUCTION

1.1 Section Heading

I recommend you **check out** the Overleaf videos on how to create a thesis in LaTex. You will see videos on how to include tables and figures. `https://www.overleaf.com/learn/latex/How_to_Write_a_Thesis_in_LaTeX_(Part_3):_Figures,_Subfigures_and_Tables`. Here is an example figure inserted, Figure 1.1.

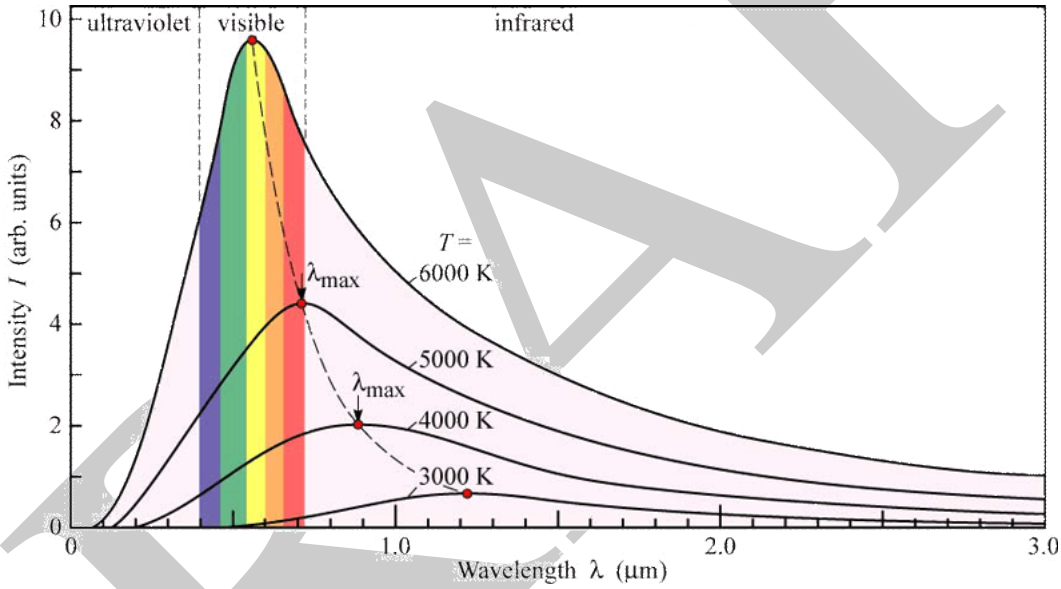

Figure 1.1. Example Figure Caption

$$E = mc^2 \tag{1.1}$$

- item 1
- item 2
- item 3

Depending on the citation and **bibliography style** *you want* to use you can change the pointer in the main.tex file. A list of supported styles in Overleaf can be found here: `https://www.overleaf.com/learn/latex/Biblatex_bibliography_styles` and `https://www.overleaf.com/learn/latex/biblatex_citation_styles`

1.1.1 Subsection Heading

If you want to use acronyms See Section 1.1.1 just refer to the

```
\gls{}
```

See Chapter 6 command and enter the acronym as you listed it on the acronym.tex file. The acronyms are listed in the ”acronym.tex” file as follows:

```
\newacronym{tag}{acronym}{spelled out words of acronym}
```

So the tag for my example will be ”abs” while the acronym is ”ABS” and the spelled out words of the acronym are ”acrylonitrile butadiene styrene”. This would look like this:

```
\newacronym{abs}{ABS}{acrylonitrile butadiene styrene}.
```

. You can see this in the ”acronym.tex” file. You have to put all acronyms in this file before using them in the body of your dissertation. Use the following code in your LaTeX source code to call up the acronym:

```
\gls{abs}
```

. In the compiled PDF you will see it look like this: acrylonitrile butadiene styrene (ABS). If you are starting a sentence with an acronym and its the first time you are using it so it will be spelled out just capitalize the ”g” in the command

```
\Gls{}
```

. In your LaTeX source code looks like this:

```
\Gls{abs}
```

. In this example that would look like this: Acrylonitrile Butadiene Styrene. Every time you use

```
\gls{abs}
```

after the initial use it will only insert the acronym: ABS.

Note that as you add in new acronyms they will appear in the "acronym.tex" file. The first set of letters in the first line of the acronym.tex file indicates which letters have acronyms currently in use in the document. If you scroll on the PDF to the List of Abbreviations you will see the first line has A and P because I have included polybutadiene (PB) in this paragraph. These letters are hyperlinked and take you to the start of that letter's list in the List of Abbreviations. The abbreviations in the List of Abbreviations are not hyperlinked.

Subsubsection Heading

If you have symbols that you plan on using you should list them in your symbols.tex file and then place them in the LaTeX source code. Use the same

```
\gls{}
```

code to insert a symbol in your document. As with the List of Abbreviations, the List of Symbols will only show those symbols you have inserted into your document, like $H+$. Inserting it into the symbols.tex file alone will not make any symbols appear in your list.

Inserting references can be done by $H+$ exporting your .bib file of all your references from the citation/reference manager of your choosing and uploading it here. You can also link your Mendeley or Zortoro accounts directly to Overleaf, if your account allows [1, 2]. I have uploaded a reference.bib file from my Mendeley account with a few references as examples.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

Sometimes you may want to repeat a figure from an earlier chapter in a subsequent chapter. This allows you to do that. Instead of

```
\caption{}
```

, use the new command

```
\repeatcaption{insert label from figure you want to repeat here}{repeat
```

" and it will add the following to the caption "(repeated from page [number]) as well as keep the numbering of the figure the same. See that in Figure 1.1.

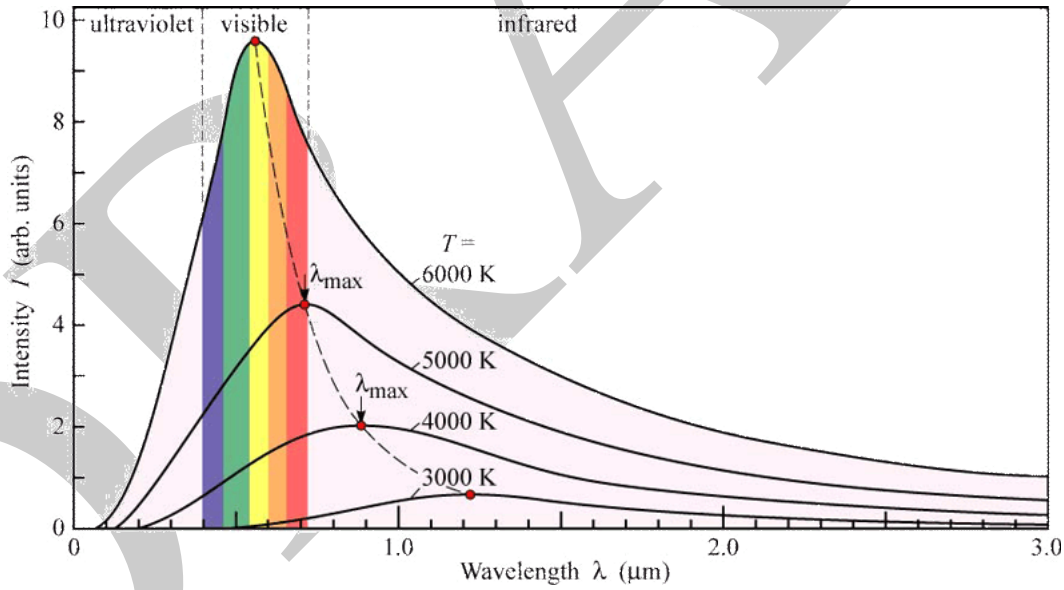

Figure 1.1. Example Figure Caption (repeated from page 1)

Fused filament fabrication (FFF) is an extrusion based printer process.

2.2 Published Stuff I never read

CHAPTER 3. EXPERIMENTAL PROCEDURE

CHAPTER 4. RESULTS

CHAPTER 5. DISCUSSION

CHAPTER 6. CONCLUSION

CHAPTER 7. EXTRA CHAPTER IF NEEDED

Appendices

APPENDIX A. TITLE OF APPENDIX A

this is appendix A

APPENDIX B. TITLE OF APPENDIX B

This is appendix B.

REFERENCES

[1] D. R. Grimes, D. R. Warren, and M. Partridge, "An approximate analytical solution of the bethe equation for charged particles in the radiotherapeutic energy range," *Scientific Reports*, vol. 7, 1 Dec. 2017.

[2] D Thwaites, D Powers, D. E. Watt, H Bichsel, H. H. Andersen, M Inokuti, M. J. Berger, and S. M. Seltzer, "Icru report 49: Stopping powers and ranges for protons and alpha particles," *Journal of the International Commission on Radiation Units and Measurements*, vol. os25, NP–NP, 2 2016.