School of Computer Science and Engineering

Faculty of Engineering

The University of New South Wales

Enabling User-Tailored Views of Your Feed

by

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Thesis submitted as a requirement for the degree of

Bachelor of Engineering in Computer Engineering

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Abstract

This document describes the requirements to theses submitted for the Bachelor of Engineering in Computer Engineering degree at the School of Computer Science and Engineering. Requirements described are that of both of context and layout of the theses. The document is written using the LaTeX template provided by the school.

- General summary of what we have done

- Though what have we done?? ...

Acknowledgements

This work has been inspired by the labours of numerous academics in the Faculty of Engineering at UNSW who have endeavoured, over the years, to encourage students to present beautiful concepts using beautiful typography.

Further inspiration has come from Donald Knuth who designed TeX, for typesetting technical (and non-technical) material with elegance and clarity; and from Leslie Lamport who contributed LaTeX, which makes TeX usable by mortal engineers.

John Zaitseff, an honours student in CSE at the time, created the first version of the UNSW Thesis LaTeX class and the author of the current version is indebted to his work.

- Thank you to supervisor

- Thank you to assessor

- Thank you to everyone else . . .

Abbreviations

BE Bachelor of Engineering

EE&T School of Electrical Engineering and Telecommunication

LATEX A document preparation computer program

PhD Doctor of Philosophy

- Place any abbreviations we use here . . .

Contents

List of Figures

- May not have any figures or place figures we refer to from our background reasearch . . .

List of Tables

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Chapter 1

Introduction

Having a set of clear requirements to their thesis is important to student finalising their BE, or other, degree. Such requirements are both in relation to the physical appearance of the thesis, as well as the writing style and organisation. The present document tries to concisely state the theses requirements while appearing in layout and structure as a thesis itself.

- Discuss what an SNS is

- Talk About Facebook and what is a feed

- Talk about ranking algorithms . . .

Chapter 2 explains the background for this document. Chapter 3 states the style and submission related requirements to theses submitted at the school. Chapter 4 explains content related requirements to theses. Chapter 5 evaluates the thesis requirements template. Finally, Chapter 6 draws up conclusions and suggest ways to further improve the thesis requirements template.

Chapter 2

Background

Every semester, students ask their supervisor how to write their thesis, what the requirements are, and what to write in it. This document tries to answer all such questions.

2.1   Previous work

- Have a sub-section for each research (group into topics of ranking algorithm and user modelling)

- May or may not need subcategories . . .

2.2   Pie is the best food

2.3   Previous work3

This is a sample!!

Previously, Nooshabadi [Noo05] has descried style-related thesis requirements, Shepherd [She05] has provided LaTeX templates while other academics have discussed con-

tents with their students. This work draws all the relevant information regarding thesis writing into one document. The present template/document is heavily influenced by Nooshabadi and Shepherd, incorporating requirements from The Graduate Research School [GRS14] for Higher Degree Research theses.

Chapter 3

Style and Submission Requirements

Requirements for other parts of the thesis work can be found on the school webpages [Noo05]. The requirements below are for the written thesis only.

- What we have done so far

- Survey

- User modelling

- Website development

- Facebook Puller? . . .

3.1   Format

The following format specifications must be adhered to for your thesis (the LaTeX template available from the school ensures this):

1. The thesis must be printed on *A4 size paper.*

2. The thesis must be typed or prepared using a *word-processor.*

   - For Undergraduate theses, you are encouraged to use both sides of the paper.

   - For Higher Degree Research theses, your submitted thesis must be printed single-sided.

3. *Margins* on all sides must be no less than 25 mm (before binding).

4. *1.5 line spacing* (about 8 mm per line) must be used.

5. All sheets must be *numbered.* The main body of the thesis must be numbered consecutively from beginning to end. Other sections must either be included or have their own logical numbering system.

6. The *title page* must contain the following information:

   (a) University and School names.

   (b) Title of Thesis/Project.

   (c) Topic Number (if applicable).

   (d) Name of Author and student ID.

   (e) The degree the thesis is submitted for.

   (f) Submission date (month and year).

   (g) Supervisor's name (for undergraduate theses).

7. After the body of the thesis, the thesis *must* contain a Bibliography or References list as appropriate.

   Authors should confer with their supervisors and School about the style of their bibliography, as this varies between disciplines.

3.2   Other physical appearance

Other requirements to the physical appearance of your theses are:

1. The report must be *spiral bound* (at your own cost).

2. Formulas and other items difficult to type may be *neatly hand-written* in *permanent* black ink.

3. *Graphs, diagrams and photographs* should be inserted as close as possible to their *first reference* in the text. Rotated graphs etc are to be arranged so as to be conveniently read, with the bottom edge to the outside of the page. *Graphs and diagrams must be legible!*

4. *Photographs* must be permanently attached to sheets at least along their left edge. Double sided adhesive may be used to attach photographs. Photographs printed on A4 size lightweight paper may be bound directly into the thesis.

5. *Computer programs* and *engineering drawings* should be bound into the thesis, usually in an appendix.

6. *Floppy diskettes/CD* may be attached to the back cover of the thesis folder using self adhesive tape or in a secure pocket.

3.3   Submission

Finally, here are some requirements to the submission procedure.

1. The *author* of the thesis is *responsible* for the preparation of the thesis before the deadline, proofreading the typescript and having corrections made as necessary.

2. All students must submit a *thesis summary sheet* with their thesis report. This summary sheet is designed to assist in determining the overall input by students into the thesis work. Please note that a separate summary sheet must be submitted by individual student, even if part of a group submitting a group thesis. The guidelines for completing the summary sheet and the summary sheet form can be downloaded from the School Office Website.

3. *Two copies* of each thesis/group thesis report must be submitted.

4. Students doing a *Group Thesis* are required to write and hand in *individual reports*. The reports should be clearly distinguishable, and appropriately cross referenced to each other. The common work overlapping between the reports should be clearly identified.

5. For undergraduate theses, there is a *page limit* of 100 pages for the main body of the thesis.

Chapter 4

Content Requirements

Students should consult the literature (e.g. [Sid99, SJW79, Coo64, GRS14]) and other resources for material on how to write a good thesis. The present document is only a very brief introduction as to what is expected.

4.1   Structure

Most theses are structured very much like the present document. The main part of the thesis can be structured in many different ways, however, but must contain: a *problem definition*; *theory* and *considerations* on how to solve the problem; a description of the *solution method* (dimensioning, construction, etc.); presentation of *results* (measurements, simulations, etc.); a *discussion* of the results (validity, deviations, comparison with previous solutions, etc.); and finally the *conclusions*.

4.2   Style of writing

1. Audience: The thesis must be addressed to engineers at the same level as the student but without the special knowledge gained during the thesis work. Such

a third-person must be able to reconstruct the results on the basis of the thesis alone.

2. Every used concept/symbol/abbreviation which is not widely know must be *defined*. The wording should be *short* and *concise*. For an undergraduate thesis, a suitable length is 40–70 pages (plus appendices). Readable(!) *figures* and *graphs* enhances comprehensibility.

3. Units. *SI units* must be used.

4.3   Documentation

1. The work must be well documented; i.e. enclosed must be the *complete schematics* of designed electronic circuits/test set-ups and/or a *program listing*, and/or etc. Documentation of *simulation results* and/or *measurement results* likewise.

2. References: For every declaration/equation/method/etc., which is not widely known, a *reference to the literature* must be given (or a 'proof' if it is the authors own work). In case material is copied verbatim, quotes must be used. This is also the case when referring to partners work in the case of a Group Thesis.

3. Plagiarism: Failure to give proper references to the literature is *plagiarism*. Plagiarism is considered serious offence and severe penalties may apply.

Chapter 5

Evaluation

This chapter is mainly provided for the purpose of showing a typical thesis structure. There are no more thesis requirements described.

5.1   Results

The result of this work is the present document, being both a LaTeX template and a thesis requirement specification.

- The results we got . . .

5.2   Discussion

The Dual function of this document somewhat de-emphasises the primary purpose of the document, namely the thesis requirements. It would be better, if these could be stated on a few concise pages (cf Appendix 1, p13).

- Discuss stuff!! . . .

Chapter 6

Conclusion

A thesis requirements/template document has been created. This serves the dual purposes of giving students specific requirements to their theses — both style and content related — while providing a typical thesis structure in a LaTeX template.

- Do we need a conclusion for thesis A ??

- Summarize what we have so far?? . . .

6.1   Future Work

Extract the requirements from the template in order to have very concise requirements.

- Possible stuff to extend our thesis . . .

Bibliography

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[Sid99]   Charles H. Sides. *How to Write & Present Technical Information.* Cambridge University Press, Cambridge, 3rd edition, 1999.

[SJW79]   William Strunk Jr. and E. B. White. *The Elements of Style.* Macmillan Publishing Co., New York, 3rd edition, 1979.

Appendix 1

This section contains the options for the UNSW thesis class; and layout specifications used by this thesis.

- Place all our code, pictures, everything . . .

A.1   Options

The standard thesis class options provided are:

undergrad	default
hdr	
11pt	default
12pt	
oneside	default for HDR theses
twoside	default for undergraduate theses
draft	(prints DRAFT on title page and in footer and omits pictures)
final	default
doublespacing	default
singlespacing	(only for use while drafting)

A.2   Margins

The standard margins for theses in Engineering are as follows:

	U'grad	HDR
`\oddsidemargin`	40 mm	40 mm
`\evensidemargin`	25 mm	20 mm
`\topmargin`	25 mm	30 mm
`\headheight`	40 mm	40 mm
`\headsep`	40 mm	40 mm
`\footskip`	15 mm	15 mm
`\botmargin`	20 mm	20 mm

A.3   Page Headers

A.3.1   Undergraduate Theses

For undergraduate theses, the page header for odd numbers pages in the body of the document is:

Author's Name	*The title of the thesis*

and on even pages is:

The title of the thesis	Author's Name

These headers are printed on all mainmatter and backmatter pages, including the first page of chapters or appendices.

A.3.2   Higher Degree Research Theses

For postgraduate theses, the page header for the body of the document is:

The title of the chapter or appendix

This header is printed on all mainmatter and backmatter pages, except for the first page of chapters or appendices.

A.4   Page Footers

For all theses, the page footer consists of a centred page number. In the frontmatter, the page number is in roman numerals. In the mainmatter and backmatter sections, the page number is in arabic numerals. Page numbers restart from 1 at the start of the mainmatter section.

If the **draft** document option has been selected, then a "Draft" message is also inserted into the footer, as in:

14	**Draft:** May 19, 2015

or, on even numbered pages in two-sided mode:

Draft: May 19, 2015	14

A.5   Double Spacing

Double spacing (actualy 1.5 spacing) is used for the mainmatter section, except for footnotes and the text for figures and table.

Single spacing is used in the frontmatter and backmatter sections.

If it is necessary to switch between single-spacing and double-spacing, the commands `\ssp` and `\dsp` can be used; or there is a `sspacing` environment to invoke single spacing and a `spacing` environment to invoke double spacing if double spacing is used for the document (otherwise it leaves it in single spacing). Note that switching to single spacing should only be done within the spirit of this thesis class, otherwise it may breach UNSW thesis format guidelines.

A.6   Files

This description and sample of the UNSW Thesis LaTeX class consists of a number of files:

unswthesis.cls	the thesis class file itself
crest.pdf	the UNSW coat of arms, used by `pdflatex`
crest.eps	the UNSW coat of arms, used by `latex` + `dvips`
dissertation-sheet.tex	formal information required by HDR theses
pubs.bib	reference details for use in the bibliography
sample-thesis.tex	the main file for the thesis

The file sample-thesis.tex is the main file for the current document (in use, its name should be changed to something more meaningful). It presents the structure of the thesis, then includes a number of separate files for the various content sections. While including separate files is not essential (it could all be in one file), using multiple files is useful for organising complex work.

This sample thesis is typical of many theses; however, new authors should consult with their supervisors and exercise judgement.

The included files used by this sample thesis are:

definitions.tex	mywork.tex
abstract.tex	evaluation.tex
acknowledgements.tex	conclusion.tex
abbreviations.tex	appendix1.tex
introduction.tex	appendix2.tex
background.tex	

These are typical; however the concepts and names (and obviously content) of the files making up the matter of the thesis will differ between theses.

Appendix 2

This section contains scads of supplimentary data.

B.1   Data

Heaps and heaps and heaps and heaps and heaps and heaps of data. Heaps and heaps and heaps and heaps and heaps and heaps of data. Heaps and heaps and heaps and heaps and heaps and heaps of data. Heaps and heaps and heaps and heaps and heaps and heaps of data. Heaps and heaps and heaps and heaps and heaps and heaps of data.

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