

## Guidelines on the layout and style of the Master Thesis

The following document describes the guidelines on the layout and style of the Master thesis of University of Colombo School of Computing (UCSC).

### Length of thesis

- Whilst the regulations do not contain a clause relating to the maximum length of theses, it is expected that work presented for the degree of Master normally between **10,000 - 30,000 words** of text and around **50 - 150 pages** (Excluding tables, figures and appendices).
- Candidates wishing to greatly exceed these sizes should discuss the matter with their supervisors and thesis committee.

### General Requirements

#### Paper

- Each copy of the thesis shall be on clear white paper of good quality having at least 80 gsm and A4 size (210 x 297 mm).
- One type of paper must be used throughout the thesis. However, a paper of different quality may be used for figures, photographs, maps etc.
- Only one side of the paper should be used in type-setting for the **final version**.
- All **soft bound** draft versions should be printed on **BOTH** sides.

#### Page Layout

- The text should be presented in the portrait layout. The landscape layout may be used for figures and tables.

#### Typeface and Font Size

- The text should be in 12 point Times New Roman font size for the entire document with the only exception being the title on the title page, chapter headings, other titles, footnotes, tables/charts, and picture/table descriptions.
- Chapter headings should be in 16 point size and any other title should be in 14 point size.
- Font as small as 10 points may be used for footnotes, the content of tables/charts, and picture/table/chart descriptions. Be consistent in font style throughout your dissertation.
- Black font is used throughout the thesis with the only exception being areas where a different font colour serves a purpose in explaining or highlighting some aspect of the research/thesis in a way black font could not.

### Line Spacing

- Typing should be with a spacing of 1.5 between lines.
- The following, however, should be single-spaced:
  - Footnotes (if absolutely necessary);
  - Quotations of three lines or more, indented and set in a block;
  - References (except between entries);
  - Multi-line captions (tables, figures);
  - Appendices, such as questionnaires, letters; and
  - Headings or subheadings.

### Margins

- Top, right and bottom margins should be of 2 cm. The left margin should be 3 cm.

### White Space

- Minimize white space as much as possible.
- White space in the text of more than three double spaced lines is not acceptable unless it appears at the end of a chapter.
- A single heading/sub-heading at the very end of a page (orphaned text) should be moved to the following page.
- Acceptable when text is followed by table/figure, etc. that doesn't fit on the same page; table title should always remain on the same page with the corresponding table.

### Pagination

- Pages should be numbered consecutively throughout the thesis.
- Numbering is not necessary for the blank pages and the title page.
- Preliminary pages (for example statement of declaration, dedication, acknowledgements, abstract, list of publications, table of contents, list of figures, list of tables and abbreviations) that precede the main text should be numbered with lower case Roman numerals beginning with (i).
- Appendices that follow the list of references should be numbered with upper case roman numerals starting with (I).
- Number the main text, starting with the "Chapter 1 – Introduction", consecutively beginning with the Arabic number one (1).
- Page numbers should be centred at the bottom of the page, entered midway between the edge of the paper and the text to prevent their loss during the binding process.
- Page numbers should not intrude into the 1-inch margin.

### Summary of Pagination

Page/Section	Type of Numbers
Blank Page	None
Title Page	None
Statement of Declaration	Begin with lower case Roman numeral (i, ii, iii)
Dedication (Optional)	Continues with lower case Roman numerals
Acknowledgement (Optional)	Continues with lower case Roman numerals
Abstract	Continues with lower case Roman numerals
List of Publications by the candidate	Continues with lower case Roman numerals
Table of Contents	Continues with lower case Roman numerals
List of Figures	Continues with lower case Roman numerals

List of Tables	Continues with lower case Roman numerals
Abbreviations	Continues with lower case Roman numerals
Chapter 1- Introduction	Begins with Arabic numbers (1, 2, 3)
Chapter 2- Literature Review	Continues with Arabic numbers
Chapter 3- Methodology	Continues with Arabic numbers
Chapter 4- Evaluation and Results	Continues with Arabic numbers
Chapter 5- Conclusion and Future work	Continues with Arabic numbers
Appendices	Begin with upper case Roman numeral (I, II, III)
References	Continues with upper case Roman numerals
Blank page	

### **Printing**

- A high-quality laser printer should be used for the final copy.
- Copies with correcting fluid will not be accepted.
- All soft bound draft versions should be printed on both sides and it is recommendation to avoid plastic covers

### **Guidelines for determining a suitable title for a thesis**

Before submitting a thesis, students and Supervisors are required to ensure that the title of the thesis is grammatically correct and reflects the study undertaken. The following guidelines should also be taken into consideration when deciding on the most appropriate title for the thesis.

- The title of the thesis should not generally exceed 20 words.
- Library catalogues and online bibliographic databases use the key words in the title (and sometimes a few other descriptors) as a way to retrieve a thesis. It is therefore essential that the title provides a meaningful description of the content of the work.
- If possible, include in the title several keywords that other researchers may be expected to use when searching for something on your topic.
- Avoid the use of abbreviations and/or acronyms. Instead, use the full terminology, unless the term is commonly used.

## Thesis Report Layout

The following presents a framework for a thesis. Addinatory chapter may be included on approach. The information is offered as a general guideline. Students should always consult their Supervisors for additional guidelines. In particular, the layout of the thesis reports can be different. Assemble the thesis report in this order:

- Front Matter
  - Blank Page
  - Title Page
  - Statement of declaration
  - Dedications (Optional)
  - Acknowledgements (Optional)
  - Abstract
  - List of Publications by the candidate
  - Table of Contents
  - List of Figures
  - List of Tables
  - Abbreviations
- Body of Text
  - Chapter 1- Introduction
  - Chapter 2- Literature Review
  - Chapter 3- Methodology
  - Chapter 4- Evaluation and Results
  - Chapter 5- Conclusion and Future work
- Back Matter
  - Appendices
  - References
  - Blank Page

## The Structure

### Cover

- The thesis submitted for final evaluation should be soft-cover securely bound (Spiral-bound) **accompanied by a PDF copy.**
- Final copies of the thesis, following viva-voce and the correction, should be hard-cover bound **accompanied by a PDF copy.**
- The hardcover should be bound in **dark black.**
- The thesis title, the author's name and the year of submission should appear on the front cover **(Annexure I).**
- The thesis title should be based 3cm from the top, in a font size equivalent to 28 of Times New Roman in the upper case **(Annexure I).**
- The author's name with initials and the year of submission should be placed 2cm from the bottom, in font size 20 **(Annexure I).**
- All texts should be centred and aligned.
- Gold lettering should be placed in the hardcover **(Annexure I).**
- The year of submission, the degree for which the thesis is submitted, and the name of the author with initials should also in gold lettering and in a single line on the spine,

running lengthwise in that order from the top (**Annexure II**).

- The thesis should be bound with two blank sheets, one each on the inside of the front and back cover.

### Title Page

- The title page should include the university crest, the full title of the thesis, the degree which the thesis is submitted, the author's name with initials, the UCSC's name and crest and the year of submission, as given in **Annexure III**.
- The university crest should be based 3cm from the top (**Annexure III**).
- The thesis title should be placed below the university crest and in a font size equivalent to 28 of Times New Roman in the lower case (**Annexure III**).
- The degree which the thesis is submitted should be placed below the thesis title and in a font size equivalent to 20 of Times New Roman in the lower case (**Annexure III**).
- The author's name with initials, the UCSC's name and crest and the year of submission should be placed 2cm from the bottom, in font size 20 (**Annexure III**).
- All texts should be centred and aligned.

### Signed Declaration

Every student must incorporate a signed and dated declaration in the thesis submitted for assessment, stating:

- that the thesis has been composed by the student, **and**
- either that the work is the student's own, or, if the student has been a member of a research group, that the student has made a substantial contribution to the work, such contribution is clearly indicated, **and**
- that the work has not been submitted for any other degree or professional qualification except as specified,
- **This will be followed by the conformity by the candidate's supervisor/s.**
- The sample declaration page is given in **Annexure IV**.

### Acknowledgement

- It is expected of the candidate to acknowledge all persons who facilitated the research described in the thesis and organizations that have helped in matters scientific, as well as the sources of funding that made the research possible.
- Use Body text style for this page.
- Avoid using bullet points.

### Abstract

- Each thesis must contain an abstract, typed on a separate single sheet.
- The thesis abstract provides a summary of the thesis.
- The purpose of an abstract is to give a potential reader enough information about your thesis that a reader can decide whether or not to refer the complete work.
- You should make sure that the abstract includes an indication of all the elements that would make your thesis worth referring.
- The abstract should be a concise description of the problem addressed in the research work, the method of solving them, the results, evaluation and conclusions.
- The abstract should not exceed 500 words.
- The abstract should have the same line spacing as the text of the body of the thesis.
- Because the abstract is included in front-matter, use a roman numeral as its page

number.

- At the end of the Abstract, you should provide a list of keywords.
- Since you are the person most familiar with your own research and its significance, it is appropriate that you should be involved in choosing the terms that help other scholars get access to your work.

### Published Papers

- List of publications by the candidate in Harvard reference style

### Table of Contents

- A Table of Contents, with page references, should be provided with sufficient detail to allow ready access to the contents of the thesis.
- A list of Figures and a List of Tables should also be included. They should include page references.

### Appendices

- Detailed information which may increase the usefulness of the thesis for examiners and subsequent workers, but which are too detailed for inclusion in the main body of the thesis may be included as appendices.
- Appendices must be numbered with upper case roman numerals and separate from the text.
- Appendices must meet standards with respect to margins and be formatted according to the remainder of the thesis, though the text may be single-spaced.

### Headings (titles)

- Below are some general rules for creating headings/titles.
  - Keep headings brief (but meaningful).
  - Headings in the body of the **thesis** should be numbered to three levels only.
  - From the fourth level onwards use bold + italics attributes, indenting as appropriate.
  - Type all headings in both upper and lower case (i.e. only the first word, nouns and verbs have initial capital letters) – **even those using the HEADER (CAPS) style, so that they appear correctly in the auto-generated Table of Contents.**
  - Place a tab stop between the heading/table/figure number and the description (do not use the space bar to move across).
  - Do not put full-stops at the end of headings.

*Examples*

#### **1.0 FIRST-LEVEL HEADING (CENTRED)**

##### **1.1 First-level Subheading**

##### **1.1.1 Second-level Subheading**

##### ***Fourth-level Subheading Onwards***

**Table 3. Tariff Rates for Logs**

**Figure 4. Production of Logs**

### **Widows and Orphans**

- There must be at least two lines of a paragraph at the bottom of the page, or at the top of the page.
- The last line of a paragraph may not appear at the top of the page, nor may the first line of a paragraph appear at the bottom of the page. These are known as “widows” and “orphans.”
- When the last line of a paragraph appears alone at the top of a page, it is called a “widow”. When the first line of a paragraph appears alone at the bottom of a page, it is called an “orphan”.
- Most versions of Microsoft Word have an automatic feature to control widows and orphans in a document.

### **Landscape Pages**

Try to avoid landscape pages, if not possible use the below-mentioned rules.

- The margins for the landscape pages should meet the same requirements as to when the page is rotated to portrait orientation.
- Page numbers should appear on the left-hand side of the landscape page (with a left 1-inch margin).
- The additional margins when the page is in landscape orientation include:
  - Top margin: 1.5-inches
  - Right margin: 1-inch
  - Bottom margin: 1-inch

### **Headers/Footers**

- Should not extend beyond the 1” allowable margin.
- Running headers are not acceptable, regardless of the style manual.
- Set at 0.5” in order to assure correct placement of page numbers.

### **Footnotes**

- Footnotes should appear at the bottom of the same page as their reference.
- Footnotes should be numbered in Arabic numerals.
- The footnote reference is superscripted and the explanation at the bottom of the page begins with the footnote reference number.
- Footnotes should have a smaller font size than the text (Times New Roman 10 pt).
- Footnotes should be kept brief and to a minimum.
- Acknowledgements should not be given as footnotes.
- References cited in the References section should not be repeated as footnotes.

### **Software**

The software should be uploaded to PGVLE link provided.

### **Numbering in Appendices**

If some Appendix has figures, tables, or equations, their numbering is separated from that in the main text. For example, figures in Appendix B can be numbered as Figure B1, Figure B2, etc.

## Abbreviations and Acronyms

- The full citation should be given the first time an abbreviation or acronym appears in the text. Thereafter, the use of only the abbreviation or acronym is acceptable.

University of Colombo School of Computing (UCSC) is a ...

## Presentation of Scientific Material

### Tables and Figures

All illustrations (maps, chart, graphs, photographs, drawings and diagrams) are referred to as Figures. Tables and figures should be able to stand alone from the text. Provide cross-references (to earlier sections) where applicable.

Please note that for formatting and editing reasons, tables should be created using the Insert Table command in Word, rather than using 'text boxes'.

Below are some rules for ensuring consistency and legibility of figures and tables.

#### Position on page

- All figures and tables should be aligned to the left margin, not centred.

#### Titles

- Use Word styles for all table and figures titles, e.g. Table Header / Figure Header / Appendix Table Header, as appropriate.
- Type titles in upper and lower case, i.e. only the first word, nouns and verbs have initial capital letters.
- Position table titles *above* tables and figure titles *below* (i.e. as captions) figures. Both types are left-aligned and should be formatted as follows:  
Table/Figure + number + full-stop/period + tab + description (no full-stop at the end)
- Within tables, use italics for titles.

#### Font size for table text

- Font should be Times New Roman – maximum size 12 pt.
- Use the same font size for similar tables.
- If there is a need to reduce the font size to fit the table onto one page, the minimum font size allowed is Times New Roman 9 pt.

#### Borders and lines in tables and graphics

- Box all graphics and tables with a 1pt line – this gives them more definition as 'units' separate from the text.
- Within tables, keep the vertical and horizontal lines to a minimum and as light as possible (hairline weight).



**Page orientation**

- Try to position illustrations so that the reader does not have to turn the page sideways to view the illustration, i.e. use portrait rather than landscape orientation.

**The numbering of figures or tables**

- All tables, graphs and figures should be numbered consecutively as follows: Figure 1, Figure 2, and so on; Table 1, Table 2, and so on.

**Run-on tables**

- Tables should be contained within one page as far as possible. Avoid large tables which run on to another page. Try to separate them into smaller tables, which are easier for the reader to grasp, or provide summary tables.
- If a table does have to run on to the next page, indicate with “(continued)” at the bottom right-hand corner of the first page in italics. “Table N. continued” replaces the title above the continuation of the table. “Table N. concluded” replaces the title above the last part of the table.

**Source, notes, or footnotes**

- Use the style (10pt) and position the note immediately below the appropriate figure or table.
- The sequence and format are as follows:  
Source: Boardman et al. (1996)  
Note: Text of the note for the table/figure.

Table/figure footnotes are indicated in superscript. Use a different numbering system (e.g. \*, †, ‡) from the rest of the document’s page footnotes as follows:

\* Text of the footnote for the table/figure.

For footnotes to the table, we recommend using the following symbols in this sequence: \*, †, ‡, §, ||, ¶, \*\*, ††, ‡‡.

**Labelling of graphs**

- Both graph axes must be labelled clearly (using not less than Times New Roman 9 pt).
- Remember to check the spelling of all labels, as often graphs and figures are not easily edited at a later production stage.

**Keys and scale****Where to provide lists of tables and figures**

- Provide a separate listing of tables, figures or graphs on the page entitled “List of Tables” and “List of Figures”. This page comes after the “Table of Contents” page/s.

**Using tabs within tables**

- If you need to insert a tab within a table cell, e.g. between a bullet point and its related text, you can press Ctrl+Tab key (Pressing the Tab key alone will take you to the next cell, not insert a tab space.). AVOID USING THE SPACE BAR TO ALIGN TEXT!

### Captions and Caption Pages

- Each figure or table must be numbered and have a caption. Captions are to be placed above tables and graphs and below figures, schemes, and illustrations. Captions may be single or double-spaced; choose one format or the other and be consistent throughout the master thesis and throughout captions for all figures, tables, etc. If any captions are more than four lines, then all captions must be single-spaced. Use consistent spacing.
- A facing caption page may be necessary with full-page figures. Such a caption page must appear before the figure/table/etc. (i.e.: caption is on page 30 and figure/table/etc. is on page 31).
- For figures/tables/etc. that extend beyond one page, the caption must state continued (i.e.: Figure 1: Cell Development, Continued). For tables, the table headers must be on all continuing pages.
- All captions, with the appropriate page numbers, are listed in the list of figures, list of tables, etc.; lengthy captions must be abbreviated to the first phrase or to fewer than four lines on the lists, however, they may be longer in the actual caption in the text. With the exception of facing caption pages and tables that are more than one page long, the table, figure, etc., and the corresponding caption must be on one page. Each figure, table, etc. must carry chapter identification or be consecutively numbered.
- Note: Exact reprints from a journal article do not need to be reformatted.

### References

- All references cited in the thesis should appear in the reference list, and all references in the reference list should appear as citations. The reference list should be formatted to comply with the Harvard reference style.

### Cross-referencing

- Ensure text explaining tables or graphs, or equations using data from tables or earlier text, correspond exactly with the data in the tables/earlier text. This is in danger of being overlooked especially if there are revisions along the way.
- Ensure that corresponding changes are made to text/table of tables and figures affected by revisions (Using the Word template and the automatic TOC function will minimise the risk of errors in this regard.).
- Ensure reference citations in the text coincide with those in the References section, i.e. the correct name (e.g. one citation having 'et al.', the other not) and year.

### Language

- The thesis should be written in English.
- The thesis should be free of spelling, grammatical and punctuation errors.
- Use of either British or American English (spelling) is acceptable provided use is standardized throughout the document.
- This does not apply to numerals, e.g. billion, etc.
- Use simple words.
- Vary sentence length.

- Avoid highly complex or convoluted sentences.
- Keep use of jargon to a minimum. It is advisable to provide a short definition of technical terms for the benefit of lay readers and explain all acronyms/abbreviations.
- Do not suddenly introduce new data/terms/jargon into the text without explaining their meaning or source. Explanation and uniformity are important for clarity.
- Avoid repetition as far as possible. Try to concentrate data on a specific topic into one section / sub-section.
- As Research Reports are scientific documents, it is important to always be specific as far as possible. Try to avoid language which creates uncertainty about your research.  
e.g. 1. "This method may be quite applicable." Do not use the words "may" or "quite" in this context: state whether the method is, in fact, applicable or not.  
2. "XYZ site does not charge an admission fee or only charges a nominal price." It has to be either one or the other, so state the fact clearly.

## Punctuation

Good punctuation makes reading easy. The simplest way to find out where to punctuate is to read aloud what you have written. Each time you pause, you should add a punctuation symbol.

- **The comma ( , )**

Use the comma to indicate a short pause or to separate items in a list. A pair of commas may delimit the beginning and end of a subordinate clause or phrase. Sometimes, this is also done with a pair of "em dashes" which are printed like this: —.

- **The semi-colon ( ; )**

The semi-colon signifies a longer pause than the comma. It separates segments of a sentence that are "further apart" in position or meaning, but which are nevertheless related. If the ideas were "closer together", a comma would have been used. It is also used to separate two clauses that may stand on their own but which are too closely related for a colon or full stop to intervene between them.

- **Colon ( : )**

The colon is used before one or more examples of a concept, and whenever items are to be listed in a visually separate fashion. The sentence that introduced the itemized list you are now reading ended in a colon. It may also be used to separate two fairly—but not totally— independent clauses in a sentence.

- **Full stop or period ( . )**

The full stop ends a sentence. If the sentence embodies a question or an exclamation, then, of course, it is ended with a question mark or exclamation mark, respectively. The full stop is also used to terminate abbreviations like etc., (for et cetera), e.g., (for exempli gratia), et al., (for et alia) etc., but not with abbreviations for SI units.

- **Elliptical Marks ( ... )**

- Writers use the ellipsis mark to show an omission from quoted material.
- The ellipsis consists of three-spaced full stops (...).
- When an ellipsis comes at the end of a sentence, it appears as four full stops (. ...).
- One full stop marks the end of the sentence and the other three full stops signal the omission.

For example:

Khadijah (1985, p. 4) wrote about the conference: "Members at the conference at Kuala Lumpur...agreed that the world educational crisis sketched in the document was real. ..."

- **Square Brackets ( [ ] )**

- Within direct quotations, brackets are used to enclose any explanatory note inserted by the thesis writer.

e.g.

[In 2005] alone, we had 200 applicants wanting to enrol for our new diploma programme (Salleh, 2005).

- Use [sic] (within square brackets) to indicate a certain doubt as to the meaning or factual errors. It simply means "thus" or "As written in the original." It is used in quotations to show that the original is being faithfully reproduced, even though it is incorrect or seems to be so. Errors which are obviously typographical such as spelling errors should be corrected as a matter of professional courtesy.
- Square brackets should also be used to show that capitalisation has been altered within a sentence. If the quotation used does not start with a capital letter in the original, but needs one in the new context because it is in the form of a full sentence, a capital letter accompanied by square brackets should be used. If, for example, six words from the following sentence are to be used,

It has been shown that some diabetics can control their disease without medication.

The student should write:

"[Some] diabetics can control their disease"(Sulmiah, 2005, p.17).

- These square brackets alert the reader to the fact that the original author had some words in the same sentence before those quoted, and did not intend the statement to stand alone. However, the quoted words can stand alone as a full sentence, and as such, must begin with a capital letter.
- **Solidus or Slash ( / )**
  - Use the word "per" rather than a solidus or symbols (as in ha<sup>-1</sup>). Do not use the solidus after %.  
e.g. 3.5% per year
  - **Exceptions**
    - When reporting numbers in a non-scientific context: "UCSC staff work 40.8 hours/week".
    - When abbreviations are used  
e.g. "Fertilizer at 3 t of nitrogen per hectare" should be written as "... 3 t N/ha."
  - Do not use the solidus twice with one number.  
e.g. 3.5 kg/person per year

### Common rules

- Use full punctuation throughout the document except for headings, titles of tables/figures/etc., (these have only a full-stop/period after the Table/Figure number and not at the end of the description), and acronyms.
- The following should be punctuated: Dr, Mr, i.e., e.g. and etc.
- Bulleted or numbered points should be consistently punctuated: either all finishing with a full-stop or none. Ditto for notes.
- In the References section, no inverted commas around book titles.
- Use an em dash ( – ) instead of a hyphen ( - ) to separate clauses and insert a space on either side of the em dash. An em dash can also be used as a substitute for parentheses.

## Paragraphing

Paragraphs are there to help the reader. They do so by breaking up the text into manageable sections. This objective is often not achieved because of poor paragraph construction. The following guidelines will assist in organising paragraphs:


- A paragraph should consist of a central statement supported by a group of details.
- In technical writing, the main statement is usually at or near the beginning. For argument or persuasion, however, the central statement is often placed at the end as a climax to the supporting details.
- The transition between paragraphs should be smooth, with some form of connecting link in the text.
- Long unbroken sections of text are discouraging to the reader and therefore paragraphs should not be unduly long. If your writing has many paragraphs exceeding 100 words, you should examine it critically.

## Italics

- Common terms like “et al” no longer need to be in italics.
- Scientific names of species etc. should be in italics.
- Titles of publications in the text are in italicized but not in the References section.

## Printing of the Master thesis

- **Before viva-voce** – The students must submit 2 copies of the thesis in temporary binding (Spirally bound) and one (01) copy of the duly filled and signed Thesis Submission Form (**separately**) should be submitted for the final examination.
- **After successful viva-voce and final correction** - The students must submit 2 copies of the thesis in hard binding. One copy is for the library and the other is for the candidate.




3 cm from the edge

# **TITLE OF THE MASTER THESIS**

(Font size 28)

**A.B. Senanayake  
2020**

(Font size 20)



2 cm from the edge

**2020**

**The Degree of Masters of Science**

**A B Senanayake**

Spine should not be boxed  
Font Size 20



3cm from the edge



# **Title of the Master Thesis**

(Font size 28)

**A thesis submitted for the Degree of Masters of  
Computer Science**

(Font size 20)



**A.B. Senanayake  
University of Colombo School of Computing  
2020**

(Font size 20)

2 cm from the edge



**ANNEXURE IV - DECLARATION**

**Declaration**

I hereby declare that the thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in the thesis. This thesis has also not been submitted for any degree in any university previously.

Student Name:

Registration Number:

Index Number:

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Signature of the Student & Date

This is to certify that this thesis is based on the work of Mr. /Ms. \_\_\_\_\_ under my supervision. The thesis has been prepared according to the format stipulated and is of acceptable standard.

Certified by,

Supervisor Name:

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Signature of the Supervisor & Date