

**Department of Agro-Technology  
Institute for Agro-Technology and Rural Sciences  
University of Colombo, Sri Lanka**

**THESIS WRITING GUIDELINES**

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**For department of Agro Technology B.AgTech thesis**

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The thesis or dissertation is the single most important element of the research. It is a test of the student's ability to undertake and complete a sustained piece of independent research and analysis and to write up that research in a coherent form according to the rules and conventions of the academic community. As the official language of study at Department of Agro Technology, Institute of Agro-Technology and Rural Sciences, University of Colombo is both Sinhala and English. Students are required to write the thesis in Sinhala or English to an acceptable international standard. A satisfactory thesis should not only be adequate in its methodology, in its analysis and in its argument but also adequately demonstrate author's familiarity with the relevant literature. It should also be written in correct, coherent language in an appropriate style, correctly following the conventions of citation. It should moreover have a logical and visible structure and development that should at all times assist the reader understands of the argument being presented and not obscures it.

The purpose of this document is to outline the standard requirements and guidelines that a thesis/dissertation should adhere to be accepted by the Department of Agro-Technology, Institute of Agro Technology and Rural Sciences, University of Colombo.

**1. Format**

1.1 Order of appearance of different sections Parts of the thesis should be ordered as follows:

1. Title page	Required
2. Declaration of Authorship	Required
3. Acknowledgements and/or Dedications	Required
4. Abstract	Required
5. Table of contents	Required
6. List of Figures	Required
7. List of Tables	Required
8. Abbreviations	Required
9. Body of the thesis	Required
10. References	Required
11. Appendices Where	Required

Students should consult their supervisors as to whether any other specific components should be included and if so where.

**TITLE**

**BY**

**NAME**

**DEPARTMENT OF AGRO-TECHNOLOGY**

**INSTITUTE FOR AGRO-TECHNOLOGY AND RURAL SCIENCES**

**UNIVERSITY OF COLOMBO**

**WELIGATTA**

**HAMBANTOTA**

**SRI LANKA**

**TITLE**

**BY**

**NAME**

A Research Report Submitted In  
Partial Fulfillment of the Requirement for  
The Degree Of  
**Bachelor of Agro-technology**  
Institute for Agro-Technology and Rural Sciences  
University of Colombo  
Weligatta  
Hambantota  
Sri Lanka  
2016

Approved by

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Supervisor 1

.....

Supervisor 2

.....

Head of the  
Department

## **1.2 Layout and Appearance**

The thesis should be:

- computer typed
- printed on white A4 paper
- in Times New Roman 12 pt (All text, page numbers, table numbers, figure numbers, captions and references)
- printed single-sided
- Double-spacing should be used in the text of the thesis.
- Single spacing should be used in headings, multi-lined subdivision headings, long tables, captions, footnotes and bibliographical entries.
- An empty line should be left between paragraphs.
- Margins should be 3 cm on the left side and 2 cm on all other sides
- Page size should be set to A4, not US Letter size.
- Pages should be numbered at the bottom in the center, using Arabic numerals (1, 2, 3 ...) starting with the first page of the introduction. Pages prior to this should be numbered with Roman numerals (i, ii, iii ...).
- Do not use underline, bold, or italic text unless with scientific reasons.
- Chapters should start on a new page, but sections and sub sections need not, if the heading or subheading is followed by at least three lines of text.

## **1.3 Recommended format of the initial sections**

### **1.3.1 Title page**

The title page should provide the information in the following order.

- The full title of the thesis
- The candidate's name and index number
- Name of the Department and the University
- The statement: "Thesis submitted in partial fulfillment of the requirements for the Degree of B.AgTech Degree in Agro-Technology
- The year and month of Submission

### **1.3.2 Declaration of Authorship**

The candidate should make the following declaration countersigned by the supervisor(s)

"I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any University and to the best of my

knowledge and belief it does not contain any material previously published or written or orally communicated by another person except where due reference is made in the text.”

.....

.....

Signature of the Candidate

Date

To the best of my/our knowledge the above particulars are correct.

.....

Signature(s)    Name(s) of the Supervisor(s)

### **1.3.3 Abstract**

The abstract should not exceed one page. The abstract should normally include the following information:

- (1) A statement of the problem the research sets out to resolve;
- (2) The methodology used;
- (3) The major findings. Other information is optional unless required by the supervisor/s.

### **1.3.4 Acknowledgement**

This will be dedicated for acknowledging people who provided the author with assistance in preparing the thesis and conducting the project (financial assistance/grants); but not only the thesis supervisor/s.

### **1.3.5 Table of Contents**

The thesis must have a table of contents listing chapter headings, section headings, sub-section headings, list of references and the appendices with their corresponding page numbers. The ‘Table of Contents’ feature of Microsoft Word (or other word-processing software) should be used to automatically create a table of contents. Dot leader lines should be used to connect the text such as headings or captions, to the page numbers.

### **1.3.6 List of Figures, Tables and Illustrations**

If appropriate, a separate list of figures, tables and illustrations should be included on separate pages immediately following the table of contents. Dot leader lines should be used to connect the text such as headings or captions, to the page numbers.

### **1.3.7 Abbreviations**

If the thesis makes use of a large number of abbreviations that may be unfamiliar to a reader, providing a list of them can act as a useful guide.

## **1.4 Recommended format of the final sections**

### **1.4.1 Appendices**

Appendices may be needed for formulae, diagrams, important lengthy procedures, or any similar data that are not contained in the body of the thesis. These should be provided after the references in the logical order they are mentioned in the main body. A list of appendices should be drawn up, each being given a consecutive number or a letter (eg: APPENDIX I or APPENDIX A), and placed in the table of contents. If there are several appendices each should receive a title. If the thesis includes special appendices of different formats such as computer data, software, or audio-visual material, students should consult the supervisor to seek guidelines as to how to append and refer to these.

### **1.4.2 References**

References should be listed at the end of the text in numerical order. List all authors and avoid using the term “et al”.

Each entry in the list of references mentioned should follow the ACS style.

All citations should include a reference in the body of the text, as well as an entry in the list of references. The thesis should consistently use a single citation style (ACS style): citations should be in the form of a superscript with Arabic numerals.

All source material, primary or secondary, published or unpublished that are the intellectual property of authors or institutions other than the writer of the thesis must be credited and correctly cited in full, including illustrations, charts, tables etc.

Failure to do so constitutes plagiarism and will result in a lower grade. Academic dishonesty and plagiarism are not acceptable.

Some examples:

Citing a journal article:

Chauvin, Y.; Gilbert, B.; Guibard, I. *Vib. Spectrosc.* 1991, 1, 299–304

Citing a book:

Le Couteur, P.; Burreson, J. *Napoleon's Buttons: How 17 Molecules Changed History*; Jeremy P. Tarcher/Putnam: New York, 2003; pp 32–47

Chapter 14 of ACS style guide, reference section can be downloaded using the following link. This section gives more details about the accepted ACS referencing style.

<http://pubs.acs.org/doi/abs/10.1021/bk-2006-STYG.ch014> (accessed on 05/02/2015)

## **2. Body of the thesis**

The thesis should be divided into logical chapters and the chapters should reflect the nature and stages of the research.

The first chapter should be the "INTRODUCTION" chapter. This should be followed by "METHODOLOGY", "RESULTS" and "DISCUSSION" chapters. The latter two can be combined and have a single chapter on "RESULTS and DISCUSSION".

### **2.1 Organization of the thesis**

The following information is meant to serve as a general suggestion (not as a rigid prescription) for those who are uncertain on how to structure their work. The supervisor may be a better guide as to how the thesis should be structured.

#### **2.1.1 Introduction**

The thesis normally begins with a general introduction presenting an overview of what it is about and what has already been done. The introduction should show why the topic given is worth investigating and why it is of significance in the field. This will normally be done with reference to existing research, identifying areas that have not been explored, need to be explored further, or where new research findings justify a reconsideration of established knowledge. At the undergraduate level, a significant contribution to the field is not expected. However, the thesis should claim to make a contribution in the sense that it goes beyond summarizing the work of others and contains original analysis and thinking towards solving of a relevant problem. The nature of this contribution should be discussed with the supervisor.

Having precisely defined the research problem, the introduction should propose a response to this problem, normally in the form of a solution. This should make explicit the objective of the research, not simply state an intention to explore or discuss. The final section of the introduction should briefly outline the structure of the body of the thesis.

The introduction should not exceed 30 pages.

### **2.1.2 Methodology**

This section describes the approach to design the experiment in order to study the hypothesis defined in the introduction of the thesis. This should also have details of how the methods were implemented in order to get the desired results. It should include all experimental/computational details along with the details (e.g. model numbers, manufacturing companies, software versions etc.,) of all the equipment/software packages used in the research.

### **2.1.3 Results and Discussion**

This section is used to evaluate the results obtained by using the described methodologies. In this section, report all your data, positive as well as negative data, with your own interpretations. When interpreting your data, discuss your results critically, while referring to previous work which was described in the Introduction.

Where data is provided in the form of charts, figures or tables, it should be mentioned in the text. This includes not only a clear reference in the text to the table or figure in which the reader can find the data (e.g. 'as table 1 shows'), but also a description of what the data shows.

### **2.1.4 Conclusion**

The conclusion should appear at the end and should not be a separate chapter. The introduction and conclusion are closely related to each other, thus, you should take care in drafting and revising to ensure that these parts reflect and do not contradict one another. The conclusion should provide answers or solutions- to the extent this is possible- to the questions or problems raised in the introduction. The argumentation of the thesis should be summarized briefly, and your main argument or findings restated clearly, without going into unnecessary detail or including additional arguments not dealt within the body. The conclusion will normally be expected to return to the wider context from which the thesis started in the introduction and place the findings in this context. You should, if appropriate, elaborate on how the research findings and results will contribute to the field in general and what sort of broader implications these may have. Suggestions may be made for further research where appropriate, but this is not a requirement.

### **2.1.5 Future work**

This can be combined with the Conclusion or may be presented as a separate section. Based on the results, you can suggest what other avenues could be taken starting from where you stopped your work. It is always good to suggest future work at the end of your thesis.



## **2.2 Appropriate use of headings and subheadings**

Headings should be distinguished from the surrounding text by typing them in boldface type. All headings of the same level should use the same style, and headings at lower levels should be less prominent than those at higher levels.

Example:

CHAPTER 2 - TITLE (TIMES NEW ROMAN, 12 POINT, UPPER CASE)

2.1 Heading for section (Times New Roman, Bold, 12 point)

2.1.1 Heading for sub-section (Times New Roman, Bold, 12 point)

All headings should be left-aligned, except chapter headings, which may be centered. A heading at the bottom of the page must have at least three full lines of text below it. Otherwise, the heading should begin on the next page. Captions related to visual material (graphs, tables, maps) should appear on the same page as the material itself. Chapter and section headings should be consistently numbered according to the numbering system given below.

Heading numbering: CHAPTER 1, section 1.1, subsection 1.1.1

All tables, figures and photographs (Plates) should also be numbered, usually sequentially within each section e.g. 1.1, 1.2 and then restarted sequentially in the next section e.g. 2.1, 2.2.

Figure captions: bottom of the figure Table captions: top of the table

## **3. Text Development and Coherence**

The B.AgTech thesis should be written for a reader who is a specialist in the discipline but not necessarily a specialist on the specific topic or question. The writer should take care to ensure that sentences and paragraphs flow logically from each other.

### **3.1 Paragraph Development**

A paragraph contains several sentences dealing with a single issue, topic or aspect. It should not therefore (except in special circumstances), be a single sentence, nor should it deal with a range of topics. One paragraph should develop one idea, through illustration or analysis, to a conclusion. It should normally start with an introductory statement indicating what it is about, develop this topic through further sentences until the topic is concluded and a new topic or a different aspect is ready to be broached. In linking sentences logically and coherently to one another, the writer should ensure that transition devices (e.g. however, similarly, in consequence, etc.) are used appropriately wherever there is a danger that the connection between two sentences may be unclear. Reference back to previous sentences (e.g: This, these, such, this question, these issues, this situation) should also be used wherever it can help make

the flow of logic clearer. When an already mentioned theme and new information about it are dealt with in one sentence, the theme should normally come first and the new information second, so as to facilitate the readers understanding.

### **3.2 Transition between paragraphs**

Although a well-structured paragraph is a unit in itself, paragraphs should also logically develop and flow from each other using devices similar to those that link sentences within the paragraph. Where the reason for a shift of topic or approach might be unclear to the reader, this should be explained. Sections, paragraphs should have both coherence and cohesion, and should make use of appropriate language skills to lead the reader logically and clearly through the stage of the writer's analysis.

### **4. Language and style**

The thesis should be written in appropriate formal academic style. Excessive use of jargon or technical terms should be avoided and any term or acronym that would not be understood by a non-specialized reader within the discipline should be explained.

You should make every effort to ensure that the thesis is free from grammatical, lexical and punctuation errors. Not only should a computer spellchecker be used, but you should also proofread the theses to check that errors do not remain that are not detected by the spellchecker. Words derived from languages other than English, such as Latin (e.g., *ab initio*, *et al.*) should be italicized. The thesis should consistently use either American or British spelling but should not alternate between two.

When using numbers in the text, numbers up to one hundred should normally be written in words, and if the first word of a sentence is a number it should be written in words. Numbers above one hundred are usually written as numerals (101,102).

SI units and correct scientific symbols should be used. Emphasis should also be given to significant figures and scientific notations.

It is the student's duty to use the available resources (Library and the internet) during the year so as to master the skills necessary to write the thesis that is as far as possible error free.

### **5. Concluding comments**

It is the duty of the student to ensure that the thesis meets the standards described above, and the duty of the supervisor to ensure that the student takes the necessary steps to meet these requirements. Where a thesis fails to meet the requirements in one or more areas, it may be returned for revision and resubmission, or in the case of plagiarism (Annex III), a severe penalty may be awarded. Students are encouraged to familiarize themselves with the above guidelines and to seek help from the supervisor.

## 6. Submission

Two copies of the bound dissertation should be submitted to Head/Chemistry on or before the date announced. You will be summoned for an oral examination. Two copies shall become the property of the University of Colombo.

## 7. References and further reading

A Manual for writers of term papers, theses and dissertations “by Kate Turabian

<http://www.learnerassociates.net/dissthes> (accessed on 10/02/2015)

<http://www.sparrowpapers.com> (accessed on 10/02/2015)

<http://www.education.monash.edu.au> (accessed on 10/02/2015)

Writing your thesis: A Survival Guide by Dr.Suzanne Barker-Collo

Coghill, A. M.; Garson, L. R. The ACS Style Guide; Oxford University Press/Oxford: New York, 2006

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