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**Following approval of your examiners' recommendations by the Graduate School Board, the Graduate School will issue a letter of award confirming that you are eligible to graduate.**

**Please remember that enrolment is required for graduation; please see the Registry web site. Graduation ceremonies are held twice a year normally; in July and in December.**

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## **Appendix 5: Guidance for Thesis Preparation**

### **Format**

Guidance on the format for a thesis is given in Appendix 6.

### **Content**

The thesis should contain in the following order: (i) Title Page; (ii) Acknowledgements; (iii) List of Contents; (iv) List of Figures and Tables; (v) List of Publications; (vi) List of Abbreviations; (vii) Summary; (viii) Introduction; (ix) Methods; (x) Results; (xi) Discussion; (xii) Conclusion; (xiii) Bibliography/References; (xiv) Appendices. It is common, although not mandatory, for the major sections, i.e. Introduction, Methods, Results and Discussion each to comprise more than one chapter if different topics are addressed in the study. The subtle variations in thesis style should be discussed with your supervisor.

### **Length**

The regulations specify a maximum number of words for a PhD, MD, DDS, thesis (Maximum 80,000 as a general rule). If the thesis does not comply with the regulations, the case for the longer length must be made by the candidate to the Higher Degrees Committee in advance of the thesis being sent to the Examiners. For an MSc and MVM thesis there is a minimum of 30,000 words and a maximum of 50,000 words. You will be asked to confirm the word count when submitting your thesis. Many students produce a thesis which is far too long. Accept that your first draft will probably require substantial cutting. Avoid producing a thesis in two volumes - every sane examiner's heart will sink.

### **Hierarchical structure of text**

Adopt a convention that confers a hierarchical structure on the text, i.e. Chapter Titles, Headings and Sub-headings. Whether headings are numbered or not depends on conventions of speciality and subject. Check this with your supervisor(s).

### **Citation of references**

A great deal of thought is required here. It is likely that the writer will, in the first instance, cite too many references, both in total and for individual subjects. It is impractical to cite every reference found on a particular point but too many will add unnecessary bulk to the text and will also break up its continuity. A number of guidelines should be considered:

- cite references only to support major findings or develop the central theme of the study;
- cite authors originally making findings and not "copycats";

- avoid excessive use of review articles;
- use review articles only to support peripheral, well established dogma;
- avoid destroying the flow and sense of the text by interjecting innumerable references.

It is important when citing references that they are in the form prescribed by the Guide to Authors published by the journal whose convention is being followed.

### **How to start writing**

It is beyond the scope of these guidelines to provide a definitive overview on how to start writing but the following points may be of value. Decide what to say - refer to the plan drawn up with your supervisors (see below). Be absolutely clear what you wish to say. A good command of English cannot compensate for a lack of clarity of thought.

Write quickly - work towards a first draft of the section you are dealing with. It is vital at this stage to keep up the momentum and flow of thoughts. Leave spaces for details you cannot quite remember and do not worry about style too much here - you can add these refinements later.

Avoid developing "writer's block" - if you find difficulty in knowing what to say next or how to say it do not waste valuable time. Refer to your plan, speak to a colleague or to your supervisor(s), or consult a paper on the particular topic giving you trouble and see how its authors dealt with it.

### **Plan of the thesis**

Before writing the thesis itself, a plan of its entire contents should be drawn up in discussion with the supervisor(s). The plan is, in effect, an outline of the entire written work of the thesis; without it, writing becomes more difficult and the writer often confused about what comes next.

This is especially true of the Introduction and Discussion sections where the logical development of ideas on paper is more easily achieved when their arrangement has been decided beforehand. The plan will initially be rough in outline but progressively more detailed as discussion with the supervisor(s) and others takes place. When complete, the plan will provide a guide as to what to do and in what order and what is to be omitted. Whether or not a certain topic is to be covered in the Introduction or discussed in the Discussion or the extent of describing a method or the number of figures to illustrate results are features of the plan. Once agreed, the plan should be altered only by mutual consent of supervisor(s) and student.

Having agreed the plan of the thesis, a topic e.g. Methods, Results or Introduction can now be selected and a draft of it prepared. In practice, some of the Methods sections will have been written up already as part of a conference paper or article and it may be convenient to start by completing the Methods section. This has the added advantage of allowing data collection to proceed at the same time; in contrast, a full time commitment to writing the Introduction or Discussion sections is usually required. A suggested chronological sequence would be as follows.

### **Methods**

The Methods section should not normally exceed 20% of the length of the entire work (excluding bibliography). It should be written, where possible, in the past tense as it will be concerned largely with describing accepted methodology. Use of the present tense should be avoided.

Diagrams of apparatus and other appropriate pictures which clarify the procedures used are recommended. The Methods section should include descriptions of equipment and each experimental procedure used, giving such detail as to enable the technique to be carried out successfully by the uninitiated.

The Methods section should also include histological data, standard curves, details of statistics used to evaluate the results and a sub-section (usually) giving a comprehensive list of the names and sources of any drugs and reagents used, the formulae of any physiological saline solutions and biochemical preparations. Where a solution or reagent is common to several procedures, it may be included in a separate sub-section Appendix.

The format of presenting this information will be to a large extent determined by the convention of the journal which has been adopted for the writing of the thesis. The order of presenting these facts will have been agreed in the plan of the thesis.

## **Results**

The convention adopted should be closely followed, especially with regard to abbreviations; writing should be in the past tense where possible; only experiments which contribute information should be described; failed experiments should be omitted; negative findings, in contrast, may be important. Results should flow from stage to stage with minimum discussion or conclusion, sufficient only to allow the reader to anticipate the next part without pre-empting a more detailed subsequent discussion. Each result should be substantiated by a figure, graph or table. Each figure should be self-supporting with a legend detailing its message and the results of the statistical analysis. Figure-labelling, legend contents and acceptable standards of production of graphs and line drawings are detailed in the appropriate Guide to Authors. While the length of the Results section should again be considered in proportion to the overall length of the thesis, this is less crucial than in the Methods section and all positive relevant results should be included.

## **Introduction**

This section should provide, from the literature, a progressive description of appropriate subject matter from an overview to a highly focused account of the problem which led to the work of the thesis. It should not normally exceed fifty pages in length. A careful balance between relevant historical data and current material must be maintained to avoid sounding out-of-date on the one hand, and pre-empting your own work on the other.

The Introduction should provide the background to your investigation with the latter appearing as an almost natural progression from existing facts. The plan for the thesis will be especially important here. If the plan has been carefully drawn up, the layout of the introduction will have been determined, the sections and even the paragraph order arranged.

The order of topics will have been settled and the writer confident of what is to be included and omitted. A plethora of references is likely to exist as background information to the writer's topic. These have to be handled to provide readable prose, the sense of which is easily understood and in which the text is not obscured by innumerable references included simply because the writer has found them.

## **Aims of the thesis**

When complete, the Introduction will have shown a gap in existing knowledge to be exploited by the writer's proposed contribution and the objective of the thesis will become clear. At this juncture it is normal practice to include a brief separate section (about two pages) to outline the aims of the thesis.

## **Discussion**

In this section, the contribution of the writer's work is placed in the context of existing literature and conclusions made. The Discussion is not a reiteration of the results hence the approach is from the writer's work, not from the literature as was the Introduction. The arrangement of the topics to be dealt with i.e. how the various results are handled with respect to existing findings in the literature will have been discussed in drawing up the plan; any logical development of ideas which discusses the findings of the experimental work in relation to existing results will be acceptable.

## **Bibliography**

This should follow the Harvard style (see Appendix 6). You should take care to ensure that you have presented the references in alphabetical order and that you have used the appropriate abbreviations and used the correct punctuation. Every reference given in the bibliography should be checked against the text. In some areas 'References' is the heading given to the list of works consulted which may confirm the research/ thesis, but which are not cited in the text, or may include cited and non-cited works.

## **Summary**

This is written normally after the other sections, although it appears at the beginning of the thesis. It should not exceed 1,000 words.

The summary highlights the background to the work, the aims of the thesis and details of the methods and results. Finally, the contribution of the results to the existing field should be shown.

## **Title page**

The title page should give the following information in the order listed:

- the full title of the thesis and any subtitle
- the full name of the author, followed by any previous qualifications and distinctions
- that the thesis is being submitted for the degree of PhD/MD/DDS/ MPhil/MSc/MVM
- that the thesis is being submitted to the University of Glasgow
- the College in which the research was conducted
- the month and year of submission.

## **Acknowledgements**

These should be contained on a separate page. It is customary to acknowledge all who provided direct assistance during the study including, for example your supervisor(s), technicians, fellow postgraduates, funding body, family.

## **List of contents**

This should be given in sequence, with page numbers for all sections of the thesis, including Chapter titles, Headings, Sub-headings and Appendices.

## **List of figures and tables**

As for the list of contents, this should give in sequence, with page numbers, the titles of all figures and tables contained within the thesis.

## **List of abbreviations**

If your thesis contains many abbreviations it is advisable to include a list of all such abbreviations at the start of the thesis.

## **Appendices**

These may consist of material of such length or of documents, tables or other evidence that, if included in the text, would interrupt its flow.

## **Access to your thesis**

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*e-mail:* [mvlS-gradschool@glasgow.ac.uk](mailto:mvlS-gradschool@glasgow.ac.uk)  
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When you submit your thesis to the Graduate School you will be given two access forms to complete. These forms instruct the University Library whether you wish to permit immediate access to the material or to restrict access. Theses of the University are normally freely available for consultation in the University Library, or within another library, immediately after deposit, but a candidate may stipulate a period of three years after deposit during which his or her consent must be sought before such access is given. A candidate is usually advised by the supervisor if commercial or patent reasons make this restriction desirable.

### **Points to ponder**

When complete, each section should be submitted to the supervisor(s) for comment. The arrangements for this will have been made beforehand with due regard to the supervisor's commitments and the time available to the writer. The process of having your work read by your supervisor(s) is greatly facilitated by common sense and understanding on both sides and by an appreciation that the exercise is designed to improve the quality of work.

### **Re-reading and re-drafting**

No matter how careful you are, you will need to check your work.

You are ultimately responsible for the quality of the submitted thesis but you should enlist the assistance of your supervisor(s) in re-drafting what you have written.

You may find it helpful to adhere to the following checklist while re-drafting:

**Content** - does the text depart from the main point being made in any section? Check for padding and irrelevance. Could a point be made more effectively by the use of illustrations?

**Scientific English** - it is important that your choice of vocabulary is appropriate for the scientific work you are describing. Remember that Scientific English differs markedly from everyday English. The correct use of scientific terms is essential but avoid "lab talk" phrases such as referring to "dose-response curves" if you actually mean "concentration-response curves". Using the term "pH" as a verb as in "pH the solution to pH 7" is also unacceptable.

**Grammar** - is the text grammatically correct? You may wish to utilise the grammar checker contained within most word processing packages. In practice, most are clumsy to use and they cannot be regarded as fool proof. For example, although they may quite correctly suggest changing "the data is" to "the data are", it is almost certain that they will incorrectly advise you to change "the conclusion from the data is" to "the conclusion from the data are". Care is therefore required.

**Spelling** - most word processors have excellent spell-checking facilities and these are highly recommended. You will, however, be required to customise the dictionary by adding scientific terms not in common English use, such as technical phrases, chemical names etc. Remember too, that spell checks do not tell you if you have the wrong word, 'were' instead of 'where'. Proof-reading is still essential.

**Paragraphs** - does each paragraph form a natural unit?

**Sentences** - are sentences too long and tortuous? Short, well-constructed sentences have more impact. Appropriate use of tense should be monitored.

**Transitions between sentences and paragraphs** - are these smooth and logical? Effective construction of an argument requires careful, logical development of your ideas. You will not succeed in this if transitions from one point to another are too abrupt. Also, ensure that no topic is left "hanging in the air" - a satisfactory resolution is required even if present knowledge cannot provide a full explanation.

**Plurals** - have these been used correctly? Check for example, datum/data medium/media.

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**Punctuation** - does your use of punctuation conform to accepted convention?

**Units of measurement** - do these conform to the S.I. convention?

**References** - are the references cited in the text appropriate and are the names and dates correct and in agreement with those in the bibliography?

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## Appendix 6:

### Recommendations for the Presentation of Theses

These requirements are based on "Recommendations for the presentation of theses (BS 4821:1990)" published by the British Standards Institution. This British Standard has now been withdrawn but as there is no replacement the following guidance will still apply.

1. Theses should be produced in a permanent and legible form - normal character size not less than 2mm.
2. Good quality paper (range 70g/m<sup>2</sup>>100g/m<sup>2</sup>) of A4 size should be used. Margins should be not less than 15mm, and 40mm at binding edge. Single, one-and-a-half, or double spacing are all acceptable, but format should be single side.
3. Pages should be numbered in a single sequence through the thesis, in single and multi-volume works.
4. The title page should give the full title of the thesis, the full name of the author, the degree for which the thesis is submitted, the organisation to which it is submitted, the College of the University in which the research was conducted, the month and year of submission. The volume number should also be given if the thesis is in more than one volume. A copyright statement in form (c) [name] [date] should be given at the foot of the title page.
5. The abstract should be placed at the beginning of the thesis, following the title page, on a separate page.
6. A table of contents should be provided, plus separate lists of tables and illustrations, and accompanying material if any. End matter may include appendices, glossary, list of references, bibliography, indices.
7. Citations in the text should be linked to the list of references following the Harvard system, with references by the author's name and date in the text and the list in A-Z order.
8. Any abbreviations should be those in normal use; where necessary a key should be provided.
9. The thesis should be firmly sewn and securely attached to its boards to ensure sufficient rigidity to support the weight of the work when standing on a shelf. The boards should be of dark coloured cloth. The author's name and title of the thesis should appear on the front cover; and the author's name (including initials), the degree for which submitted and the year of submission should appear on the spine, lettered from top to bottom.

The volume number (if any) should also be given on the spine.



10. Illustrations of all kinds should normally be bound in with the thesis. Any material which cannot conveniently be bound should be packaged so that it can be kept with the thesis, and should be labelled in a similar way.

### **Additional papers**

Published papers relating to the main subject of the thesis, but which do not form part of the thesis itself, may be included in support of the application. (In practice few candidates submit papers which are not an integral part of the thesis.)

Details of page layout and order Margins

- Top – 18mm
  - Bottom – 18mm
  - Left – 15mm
  - Right – 15mm;
  - Gutter – 25mm  
(making a total binding edge of 40mm)
- Pages (printing)
- Single sided on A4 paper, 70-100g/m<sup>2</sup>

### **Front matter**

Title page

Title of the Thesis Full name of Author

Any qualifications (e.g. first degree)

Submitted in fulfilment of the requirements for the Degree of xxx Institute of xxx/School of xxxx

College of Medical, Veterinary & Life Sciences University of Glasgow

Month and Year of deposition to the Library

### **Abstract**

(following title page):

Synopsis of thesis, stating the nature and scope of work undertaken etc. This should be on its own on a single page.

### **Contents**

Pull out headings with page numbers (to include all pages but no reference to the contents page itself) Order (Note: all these pages may not be required, depending on the structure of your thesis).

1. Title page
2. Abstract
3. Table of contents
4. List of tables
5. List of figures
6. List of accompanying material
7. Preface
8. Acknowledgement
9. Author's declaration
10. Definitions/abbreviations
11. Text – in chapters
12. Appendices
13. Glossary
14. List of references
15. Bibliography

### **Text format Fonts**

- Times New Roman or Trebuchet MS for the body of the thesis
- Arial or Trebuchet MS for Headings

### **Characters**

- Not less than 2.0mm for capitals and 1.5mm for height of lower case – 12 point as the base front size Words
- Even space between characters and words

### **Line spacing**

- 1.5 line spacing

### **Paragraphs**

- Flush left or may be justified (note: formatting problems can be encountered with justified paragraphs)
- With an additional line space between paragraphs (e.g. in 1.5 line spacing, 3 lines (1.5+1.5) between paragraphs)

### **Headings**

- Used to indicate the hierarchal structure of the text
- Normally not more than 4 levels – including chapter headings as first level

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- Each level distinguished from the other by position, typography, or both
- Preceding and following space should be not less than the space between the paragraphs
- Not centred – except possibly for chapter headings

### **Heading numbering**

If required, in the format –

1. Heading 1

1.1 Heading 2

1.1.1 Heading 3

### **Numbering**

Page numbering of chapters

- Arabic numerals should be used throughout. Page numbers should be visibly clear of the text, preferably in the top outer corner of each page, although they may be placed in the footer.

### **Object numbering**

- Tables, figures and equations should each follow a separate sequence. Arabic numerals should be used
- Tables and Figures may be numbered in the form - Fig. 1-2 (Figure 2 in Chapter 1)

### **Title page**

- The title page should be counted, but not numbered

### **Other formatting**

Footnotes/Endnotes

- Footnotes – throughout the text
- Smaller in character size and more closely spaced (same size as header/footer text is recommended (10pt), although if over 100 words, 12pt should be used)
- Hanging indent format

### **Tables**

- Each should appear complete on one page, close to the first reference to it
- If many tables, they may be collected at the end of the thesis as an appendix
- Ideally, tables should appear in normal portrait format

## Citations/References

Citations in the text should be linked to the list of references, preferably following the Harvard system which requires the author's name and date to be given in the text and the references listed in A-Z order. References should be given in full in a single section at the end of the thesis. Journal names may be abbreviated using the recognised abbreviation for each. Examples of references given using the Harvard system.

Milligan, G, Stoddart, L.A. & Brown, A.J. 2006. G protein-coupled receptors for free fatty acids. Cellular Signalling 18: 1360-1365. Grafen, A. & Hails, R. 2005. Modern statistics for the biosciences. Oxford University Press, Oxford. 351pp. Mantel, L.H. & Farmer, L.L. 1983. Osmotic and ionic regulation In: The Biology of Crustacea – Volume 5 Internal anatomy and physiological regulation (ed, L.H.Mantel), Academic Press, New York, pp. 53-161.

Important: If you use Reference Manager or EndNote you should be aware that the 'Harvard' export format used by both programs gives very different formats for the references. It is recommended, therefore, that users of EndNote use the 'Harvard' option but users of Reference Manager should use the 'British Journal of Nutrition' option.

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## Appendix 7: Important University Guidelines and Regulations Plagiarism – Policy Statement (extract)

The following is an extract from the University Calendar  
([www.glasgow.ac.uk/services/senateoffice/calendar/](http://www.glasgow.ac.uk/services/senateoffice/calendar/))

31.1. The University's degrees and other academic awards are given in recognition of a student's personal achievement. All work submitted by students for assessment is accepted on the understanding that it is the student's own effort.

31.2. Plagiarism is defined as the submission or presentation of work, in any form, which is not one's own, without acknowledgement of the sources. Special cases of plagiarism can also arise from one student copying another student's work or from inappropriate collaboration.

31.3. The incorporation of material without formal and proper acknowledgement (even with no deliberate intent to cheat) can constitute plagiarism. Work may be considered to be plagiarised if it consists of:

- a direct quotation;
- a close paraphrase;
- an unacknowledged summary of a source;
- direct copying or transcription.

With regard to essays, reports and dissertations, the rule is:

- if information or ideas are obtained from any source, that source must be acknowledged according to the appropriate convention in that discipline; and any direct quotation must be placed in quotation marks and the source cited immediately. Any failure to acknowledge adequately or

- to cite properly other sources in submitted work is plagiarism. Under examination conditions, material learnt by rote or close paraphrase will be expected to follow the usual rules of reference
- citation otherwise it will be considered as plagiarism. Colleges should provide guidance on other appropriate use of references in examination conditions.

31.4. Plagiarism is considered to be an act of fraudulence and an offence against University discipline. Alleged plagiarism, at whatever stage of a student's studies, whether before or after graduation, will be investigated and dealt with appropriately by the University.

31.5. The University reserves the right to use plagiarism detection systems, which may be externally based, in the interests of improving academic standards when assessing student work.

### **Commercial Editing**

It is College policy that students should not be permitted to use commercial editing or translating services in the preparation of written work submitted for assessment. Any instances of the use of such facilities will be investigated in the same way as plagiarism, and if necessary will be subject to similar sanctions.