

**University of Windsor – Department of Chemistry & Biochemistry
59-410 Research Project – Thesis Guidelines – version 1.0 – July 23, 2008**

This is a rough set of guidelines – there are plenty of better sources of information on the web. I will update these guidelines as time permits.

These guidelines are not an original piece of work (as your thesis will be), but rather, are quite liberally borrowed from the University of Windsor thesis and major paper style guide, as well as other sources from the web (see web page links).

Thesis Outline:

1. Title Page
2. Approval Page
3. Author's Declaration of Originality
4. Abstract
5. Dedication (where applicable)
6. Acknowledgements (where applicable)
7. Table of Contents
8. List of Tables (where applicable)
9. List of Figures (where applicable)
10. List of Appendices (where applicable)
11. List of Abbreviations, Symbols, Nomenclature
12. Body of thesis (divided into various chapters)
13. Bibliography
14. Appendices (include copyright releases
15. here where applicable)
16. Vita Auctoris

Full explanations of the categories above:

- Faculty of Graduate Studies Guidelines for Major Papers, Thesis and Dissertations
- Sample online theses

Formatting

Paper

Use paper of good quality, **8½ x 11 inches (21.5 x 28 cm)**. Do not use erasable paper or thin computer paper. Large foldouts can be attached to the back of the thesis. The thesis may be handed in bound (binding options are available at Document Services – a bound copy is useful for your supervisor’s storage and further reference to your work).

Margins

Every page must have the same margins: **1½ inches (3.8 cm) on the left, 1 inch (2.5 cm)** everywhere else. It is essential that these margins be observed, as text or diagrams extending into the margins could be destroyed in the binding process.

Typing/Font Size

The spacing of the typed lines should be 1½ or 2 spaces, the font size should be a minimum of 12, and the font should be clearly readable (i.e., Times New Roman, etc.) and printed in black ink. The only exceptions are: quotations, tables, tables captions, figures, figure captions and references.

Pagination

Page numbers should be located in the bottom centre of the page.

Page numbers are assigned as follows:

Lower case Roman numerals

Title Page (not shown) - page i

Signature/approval page (not shown) – page ii

Declaration of Originality up to List of Abbreviations, Symbols, Nomenclature – page iii and upwards

Arabic numerals

Remainder of thesis

Figures

All figures must be clearly represented; colour figures should be used only if absolutely necessary. Figures must be clearly captioned with an increasing figure number. If a figure is borrowed, copied or adapted from another book, journal, thesis or other source, this should be cited in the caption.

Tables

All tables must be clearly laid out, with proper labels and units. Each table should be numbered, have a clearly written caption, and may include detailed footnotes to explain the content.

Main Body of the Thesis

A good style for a chemistry or biochemistry thesis is based on the formatting of the American Chemical Society. Before starting to write your thesis, sit down with your supervisor, and construct an outline.

Abstract – Write a brief summary of what is contained in this thesis. No more than 400 words!

Introduction – Discuss the importance of your topic/research area, literature review the area and related works, and finish with an outline of what will be presented in your thesis.

Theoretical Background – This section is optional, and sometimes written as a subsection of the introduction. This is largely for projects involving some background material (e.g., basic biology, physics and/or chemistry concepts) that people may need to understand your work. Consult with your supervisor on this.

Experimental Section/Technical Details – This is a thorough outline of how you conducted your experiments, synthesized molecules, carried out calculations, simulated your data, etc. Your supervisor can advise you on what to include here. The experimental details are easy to write, and a good place to start getting your thesis together.

Results & Discussion – “Results” is a description of what you have observed, whereas “Discussion” is a contextualization and analysis of your results. Some authors prefer to group these together, while others count them as separate sections. Consult with your supervisor.

Conclusions – This again is a summary of your work, but unlike in the abstract, major conclusions, important impact factors and future extensions of the project should be highlighted.

References/Bibliography

When writing your thesis, it is crucial that you acknowledge the resources you have used since your readers have to be able to access these sources, and **failure to do so constitutes plagiarism.**

You must cite sources:

- Inline, in the text of your thesis
- In a reference list or bibliography positioned near the end of the thesis.

Numerical citation format:

- Collate all of the references at the end of your research paper in numerical order.
- Reference numbers are included as inline superscripts.

The low yield is a result of the loss of product during the workup procedure.¹ Samuel² believes that hexamesityltrimethylsilyl-1,3-dioxolane arises from the rearrangement of a 1,2-germadiacetone. Baines and Cooke³ trapped the germasilene with methanol in a regioselective manner.

(if there are more than two author names, you may use "...and co-workers" or "et al.")

Reference formatting examples (see the web for a more thorough list)

Journals (a list of journal abbreviations can be found on the web)

1. Chong, J.M. *Tetrahedron* **1989**, *45*, 623-628.
2. Chong, J.M. *Tetrahedron Lett.* **1992**, *33*, 33-36.
3. Chong, J.M.; Wong, S. *J. Org. Chem.* **1987**, *52*, 2596-2598.
4. Chong, J.M.; Park, S.B. *J. Org. Chem.* **1993**, *58*, 523-527.
5. Chong, J.M.; MacDonald, G.K.; Park, S.B.; Wilkinson, S.H. *J. Org. Chem.* **1993**, *58*, 1266-1268.

Books

- McQuarrie, D.A.; Simon, J.D. *Physical Chemistry: A Molecular Approach*; University Science Books: Sausalito, CA, 1997; pp 963-1009.
- Brudvig, G.W. Structure and Function of Manganese in Photosystem II. In *Mechanistic Bioinorganic Chemistry*; Thorp, H. Holden; Pecoraro, Vincent L., Eds.; Advances in Chemistry Series 246; American Chemical Society: Washington, DC, 1995; pp 249-263.

Thesis

- Kirby, Christopher William. Ph.D. Thesis, University of Waterloo, 2000.