

## **Graduate Department of Pharmaceutical Sciences Guidelines for Thesis Formats**

Students have the option of preparing a thesis in a continuous (“traditional”) format or a manuscript-based (“alternative”) format. Before embarking on either the continuous or manuscript-based format, students should consult with their supervisors. Guidelines for each format are provided below to help students meet the expectations for theses in the Graduate Department of Pharmaceutical Sciences. Students should also review the School of Graduate Studies’ webpage on Electronic Theses and Dissertation Preparation and Submission (see: <http://www.sgs.utoronto.ca/informationfor/students/finup/producingthesis.htm>) to ensure they comply with all those formatting and other technical requirements.

### **A. Traditional Format**

The traditional thesis format reflects the original conception of a thesis or dissertation as a “book” presenting the stages in the candidate’s research project(s). The traditional format is organized as a single narrative describing the context of the research, the methods used, the findings and conclusions. It normally consists of the following components:

- **Title page**
- **Abstract**
- **Acknowledgements**
- **Table of Contents**
- **Lists of: tables; figures; appendices; abbreviations, symbols, and nomenclature** (where applicable)
- **Introduction** (Chapter 1) - normally consisting of a statement of the problem, rationale for the project, purpose of the study, study objectives and hypotheses if applicable.
- **Literature Review** (Chapter 2) - may be combined with the introduction and normally includes a summary of other work in the area, identification of gaps in current knowledge and justifications for doing the research.
- **Methods** (Chapter 3) - normally including a description of the methods employed sufficiently complete to allow replication of the study either from the information provided or from the cited literature.
- **Results** (Chapter 4) - normally including a description of the research results and necessary supporting data. Given that some research is the product of a collaborative team effort, it is important to provide full disclosure of any work included in the thesis that was not carried out by the student. Supporting materials such as copies of questionnaires, supplementary analyses etc should be provided in an appendix to the thesis.
- **Discussion and Conclusions** (Chapter 5) - normally including a brief summary of key findings, a full discussion of the findings and how they relate to previously published work, strengths and limitations of the study, recommendations for future studies and a conclusion (related back to the original purpose/objectives of the study identified in the introduction, including support or rejection of hypotheses if applicable).
- **References**
- **Appendices**

## B. Manuscript Format

The manuscript-based format reflects the fact that results in the sciences are almost always published as journal articles. In the manuscript-based format, the thesis is organized around a series of self-contained manuscripts to which the candidate has contributed very substantially (normally signified by primary authorship). Normally a manuscript-based thesis would contain a minimum of 3 manuscripts for PhD students or a minimum of 1 manuscript for MSc students. Ideally these manuscripts will be published (or in press), but at minimum they must be deemed “publishable” by the student’s thesis committee. A manuscript-based thesis normally consists of the following components:

- **Title page**
- **Abstract**
- **Acknowledgements**
- **Table of Contents**
- **Lists of: tables; figures; appendices; abbreviations, symbols, and nomenclature** (where applicable)
- **Introduction** (Chapter 1) - normally consisting of a statement of the problem(s), rationale for the project(s), overall purpose of the study or studies, and an explanation of how the manuscripts relate to each other as well as the overall purpose of the research.
- **Methods** (optional – Chapter 2) - A methods section may be necessary if the requirements for publication limit the description of the methods in the included papers and the supervisor or thesis committee recommends the inclusion of additional methodological details.
- **Manuscripts 1, 2, 3 and others if necessary** (Chapters 3,4,5 ) - included exactly as published (or as a manuscript for submission) but formatted according to the SGS standards and normally consisting of an abstract, introduction, literature review, methods, results, discussion, conclusion, and references. Each manuscript-based chapter should begin with a preamble providing the full citation of the manuscript if published, the names of all the authors if the manuscript has not yet been published, declaration of work performed by the student and a description of role of each author including full disclosure of any work included in the manuscript not carried out by the student. Additional materials often found in electronic appendices to published manuscripts, including “results not shown”, in the publications should be included in the thesis.
- **Discussion and Conclusions** (Chapter 6) - normally including a brief summary of key findings from each of the manuscripts and a discussion of how they relate to each other and previously published work, strengths and limitations of the program of research as a whole, recommendations for future research and a final conclusion that relates to the original purpose/objectives of the study identified in the introduction.
- **References** - normally excludes references which are included with each manuscript chapter.
- **Appendices**