

A GUIDE FOR THE WRITING OF GRADUATE THESES

MASTER OF SCIENCE PROGRAM

DOCTOR OF PHILOSOPHY PROGRAM

FACULTY OF VETERINARY MEDICINE

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5.1.0 General Guidelines

5.1.1 Introduction

The thesis is considered the major component of the thesis-based Master's and of all Ph.D. degree programs. Graduate theses are required of candidates for both of these advanced degrees as evidence of competence in research. The foremost requirement of a thesis is that it be a significant contribution to knowledge. This requirement implies novel hypotheses, accurate research, effective presentation of that research, and correct use of scientific and scholarly language. Although thesis research is carried out under supervision, with research frequently performed in collaborative circumstances, it must be demonstrable that the thesis represents work that has been done independently. This is particularly the case for doctoral theses, in which the contribution to knowledge must be original, substantial, and verifiable. Since theses are contributions to knowledge and are placed in the public domain, sound academic standards must be adhered to in their preparation and presentation.

Students should read carefully the following guidelines and be familiar with the university Regulations for Graduate Programs that apply to the thesis. If points are still unclear, students are advised to consult their Supervisor and/or Department Chair before proceeding with the preparation of a thesis.

If a thesis does not follow the accepted format, is not on the required quality of paper, is not free of mechanical errors, is not of letter quality, or is improperly bound, it will not be accepted and the degree will not be conferred until an acceptable standard has been met.

The following guidelines regarding the preparation of a thesis assume that the medium of diffusion will be paper and microfilm. Although North American universities, libraries, and agencies that store thesis abstracts are moving in the direction of full electronic storage, such a system is not yet in place. Until such changes occur, AVC will recommend the traditional "hardcopy" thesis format to provide a vehicle to make graduate students' research available to the academic and research community on a long-term basis.

5.1.2 General Form

Consistency of form and style should be maintained throughout the thesis. It may be helpful to consult a style manual on thesis writing. Accepted rules of grammar must be followed, and forms of spelling and punctuation must be used with consistency (Canadian, American, or British, may be selected as approved by the Supervisory Committee). Suggestions for assistance in writing clear, correct and concise prose are:

- 1) The Canadian Style: A Guide to Writing and Editing, Dundurn Press Limited in co-operation with Public Works and Government Services Canada, 1997.
- 2) Clear, Correct, Creative: A Handbook for Writers of Academic Prose, K. Taylor, H. Avery, and L. Strath, The Academic Skills Centre, Trent University
- 3) The Elements of Style, W. Strunk Jr, and E.B. White, MacMillan Publishing, New York, 1959

The general arrangement of the thesis should be as follows:

- i) title - page
- ii) page describing conditions of use of thesis
- iii) permission to use postgraduate thesis
- iv) certification of thesis work
- v) abstract
- vi) acknowledgements
- vii) table of contents
- viii) main body (text) of thesis
- ix) appendices

The recommended length of the main body of a Master's thesis is between 50 and 150 pages. The recommended length of the main body of a Ph.D. thesis is between 150 and 300 pages. The main body of a thesis should normally contain: 1) a statement of objectives, 2) a critical review of the relevant literature, 3) the theoretical and analytical framework for the studies, 4) the results, 5) a discussion of results, and 6) conclusions.

The nature and relative size of each one of these components will vary from thesis to thesis and be determined by the problem under investigation. The graduate student in consultation with his or her Supervisor and Supervisory Committee should decide on the structure and components of the thesis in advance of beginning the writing.

Students planning to include previously published material, as chapters in the thesis should consult section 5. for the format expectations. For guidelines on the content of the body of the thesis in relation to collaborative research and time period of the research see section 6.

5.2.0 Specific Guidelines

5.2.1 Paper, Printing, and Type

With the exception of photographs, one type and brand name of paper must be used throughout the thesis for a consistent appearance. The standard paper size is 21.5 by 28 cm. (8 1/2 x 11 inches). In order that the thesis paper will not discolour during storage and will withstand frequent use, a good quality paper, like 20 lb Bond, with a hard, bright, and even surface is required for the master copy. (Paper suitable for thesis printing changes over time; the student should ask UPEI printing services for the name of the paper recommended for a thesis.)

All typing and printing must be on one side of the paper only. Quotations that are single spaced should be indented and not enclosed in quotation marks. The body of the thesis must be double spaced, with the exception of (foot) notes and long quotations, which may be single spaced. The lists of references, figure legends, and other items such as appendices should be single spaced.

Use only one font size and one font type throughout the thesis (10-12 characters per inch), with the exception of figures, tables, and footnotes in which the same font type should be used, but smaller font size may be appropriate. Boldface type for headings and italics for emphasis are permitted. Characters not available on standard typewriters

or some word processors (e.g. mathematical symbols, Greek letters, etc.) are acceptable if neatly executed by hand with black India ink.

Laser printing is recommended. However, all letter-quality printers may be considered. The GSR Office will not accept thesis copies that are disfigured by corrections. All pages of all copies must be clean, clear and error-free showing letter-quality printing.

5.2.2 Margins

For binding purposes, a minimum left margin of four centimetres (one and one half inches) is required on each page. Other margins should be at least two and one half centimetres (one inch). These margin regulations must be met on all pages used in the thesis including pages with figures, tables, or illustrations.

5.2.3 Numbering of Pages

Each page in a thesis, including those in the appendices must be numbered consecutively. Illustrative material is to be numbered as well as the text. If photographic paper is used, numbers may be placed neatly in black ink on the reverse side. Page numbers must appear at the midpoint of the bottom of the page, one and one half (1.5) centimetres from the bottom. Roman numerals (lower case) are used for the prefatory pages and the numerals are placed in the middle of the page one and one half (1.5) centimetres from the bottom. All items in the prefatory section should begin on a separate page. All pages of the main body of the thesis, beginning with the introduction (Chapter 1) must be numbered consecutively with Arabic numerals. This includes pages containing illustrations, tables, bibliography, and appendices. When landscape mode is used for pages containing figures, tables or illustrations, the page number position must be modified so that it appears at the bottom midpoint as on other pages. After all material has been assembled, the thesis should be verified carefully for completeness, for the order of the pages and sections, and for correctness of pagination.

5.2.4 Illustrative Material

5.2.4.1 Tables and Figures

The presentation of illustrative material should be consistent throughout the thesis. All tables and figures must be numbered consecutively with Arabic numerals. Tables and figures should be dispersed throughout the body of the text. In each case, the table or figure should appear on the page immediately following the first text reference to it. If it is necessary to refer again to a figure or table in a subsequent part of the thesis, reference should be made to the page on which it appears, which can be done as follows, "...Figure 3 (page 54).....".

If possible, titles of figures and tables should be on the same page as the figure or table. In those cases where this is impossible, the title and explanation of the figure or table may be placed on the reverse side of an immediately preceding blank page so that it faces the figure or table. However, the number of such a page must be adjusted on the blank side so that it conforms to the position of other page numbers in the rest of the thesis. More than one figure may be placed on a page that offers adequate space. Tables and figures may be placed in either portrait or landscape mode. The title and any accompanying information should be placed in the same mode as the table or figure

(see sample table, Appendix G and sample figure, Appendix F). Students should remember that microfilming is a black and white photographic process. Colours appear as slightly varying shades of grey. Thus, lines on a graph should be identified by labels or symbols rather than by colours. Similarly, shaded areas such as provinces on a map have better contrast if crosshatching is used instead of colour.

5.2.4.1.1 Layout of Tables

Tables must conform to the margin requirements of the thesis format. They should be centred between the left- and right-hand margins, and, as appropriate, between top and bottom. Contents of the table must be preceded and followed by a single solid line. Similarly, solid lines must appear at other appropriate places horizontally inside the table. Vertical lines are usually unnecessary in tables. The number and title should be placed above the table. The title of the table should be as short as possible but should indicate the major focus of the table. Each column of a table should have a short or an abbreviated heading. Ordinary rules of referencing and footnoting apply. The numbering of footnotes in the table is independent of that followed in the text. Place explanatory matter in footnotes, not in the heading. Explain in footnotes all non-standard abbreviations that are used in each table. Designate footnotes by superscript letters (e.g. ^{abc}). Identify statistical measures of variations such as standard deviation and standard error of the mean. Tables should not be folded. It is strongly recommended that oversized tables be reduced by photocopying in such a way that they remain clearly legible. See Appendix G for an example of the table format.

5.2.4.1.2 Layout of Figures

Each figure must have a figure number (Arabic) and a title. The number and title of the figure should appear at the bottom of the figure in the figure legend. The legends for figures and illustrations should contain sufficient descriptive information to make the significance of the illustrations evident without reference to the text. When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend. If the figure is a graph, both axes must be properly labelled. If a figure shows more than one relationship, each relationship should be properly labelled with the appropriate axis. Figures must conform to the margin requirements of the thesis format. They should be centred between the left- and right-hand margins and, as appropriate, between top and bottom. See Appendix F for an example of the figure format.

5.2.4.2 Photographs and Plates

Wherever possible, professional photocopies made by a commercial printer should be used instead of photographs. When using photographs, each should have the full range of contrast from true black to pure white. Photographs with limited contrast will not reproduce satisfactorily on positive microfilm. Photomicrographs must have internal scale markers. Symbols, arrows or letters used in the photomicrographs should contrast with the background. Dry mounting tissue provides the neatest and most permanent method of affixing photographs. Do not use rubber cement or glue. For advice and assistance in mounting photographs consult the Graphics Office. The presence of photographs may make page trimming difficult. Laser photocopies are also suggested instead of colour photographs, since it is now possible to make photocopies of as high a quality as photographs. If the thesis includes coloured photographs, the unbound copy

submitted for microfilming must include black and white photographs or digital copies of the same subject (either originals or photographer's reproductions). Photographs with a glossy finish and photographs with dark backgrounds should be avoided.

5.2.4.3 Oversize Pages

Wherever possible, charts, graphs, maps, and tables that are larger than the standard page size must be photo-reduced in such a way that the material remains clearly legible. Where this is not possible, they must be carefully folded for binding into the manuscript. The fold should be made at least one and one half- (1.5) centimetres from the edge of the page in case the binder trims the edges and destroys the foldout. Make as few folds as possible. Folding is to be avoided in the case of Ph.D. theses, since oversize pages may be impossible to microfilm. Excessively long tables, particularly those from computer printouts, should be placed in an appendix.

5.2.4.4 Other Material

The research environment and research patterns and models are changing. Students must be encouraged to take full advantage of expanding technical and informational resources. This may result in the thesis containing material other than paper copy. When this occurs, students should consult at an early stage with their Supervisor, Supervisory Committee, the GSR Office, and the company that will bind the thesis. It is likely that a pocket, to be bound into the thesis, can be designed to contain such material.

5.2.5 Long Theses

Theses of more than 150 (Master's) or 300 (Ph.D.) pages are to be avoided, particularly if their length is an indication of repetitive presentation or an overly ambitious research project. A thesis that exceeds 300-350 pages should be bound in more than one volume. Volume one should contain a table of contents for the entire thesis. Each subsequent volume must contain a duplicate of the title page of the first volume, a table of contents, a list of figures, and a list of tables to cover the portion of work found in that particular volume, and its own prefatory pages. The page numbering (Arabic) of the body of the thesis and the prefatory page numbering (lower case Roman numerals) should flow consecutively from one volume to the next. The bibliography and appendices for all the volumes are to be at the end of the last volume and referred to in the table of contents of each volume. When the appendix is bound in a separate volume, this volume should have a title page duplicating that of the main volume but with the addition of the word "Appendix or Appendices" just before the title of the thesis. The word "Appendix" as well as the short title must then appear on the spine. Numbering of the pages of the appendix (Arabic numerals) must flow in sequence from the first volume.

5.3.0 Arrangement of Thesis Contents

5.3.1 Title page

The first page of the thesis is the title page. The title page should contain the following information: the title of the thesis, the degree for which the thesis is submitted, the name of the department and faculty, the name of the institution, the full name of the author, the date, and the copyright notation. No other information should appear. The supervisor's

name should not appear on the title page. A sample title-page is attached as Appendix A.

5.3.2 Conditions for the Use of the Thesis

The second page of the thesis states the conditions under which material in the thesis may be used, and to whom inquiries for permission to use such material should be addressed. A sample of this page is attached as Appendix B.

5.3.3 Permission to Use

Students hold copyright to their thesis. The third page of the thesis is a statement by the student in paragraph form granting permission to use the thesis under specifically stated conditions and indicating the address of the position, department, or college to which requests for such permission should be sent. A copy of the form, "Permission to Use Postgraduate Thesis" is attached as Appendix C.

5.3.4 Certification of Thesis Work

The fourth page of the thesis is the completed "Certification of Thesis Work" form. A copy of this form is attached as Appendix D.

(Electronic templates for all of the above forms are available on the G drive in the GSR folder as follows: G:\GSR\thesissignatureforms.wpd)

5.3.5 Abstract

The abstract should summarize the main features of the thesis in 500 words or less. The abstract should identify clearly and succinctly the purpose of the research, the methods used, the results obtained, the significance of the results, and conclusions.

(One additional copy of the abstract should be prepared and given to the Associate Dean of Graduate Studies and Research, to be sent to Dissertation Abstracts. This copy should have the title of the thesis and the author's name at the top.)

5.3.6 Permission to Reproduce

Students who have reproduced or used a "substantial part" of a work or other proprietary material in the thesis must obtain permission from the rights-holder. Students must be aware that obtaining this permission may take some time and may require a fee.

5.3.7 Acknowledgements

The content of this single page is left to the discretion of the author. It is suggested however that the page refer to guidance received by the author from his or her Supervisor and Supervisory Committee members. Reference should also be made to any financial assistance received to carry out the project. Any extraordinary assistance received by the student, for example in word processing, data collection, data analysis, and so on, should be properly acknowledged. The acknowledgements should not exceed 250 words.

5.3.8 Dedication

Inclusion of a dedication is permitted.

5.3.9 Table of Contents

The table of contents must list and provide page references for all elements of the thesis. For the text of the thesis, it will indicate chapters, sections, and important subdivisions of each section. The numbering and format of material in the table of contents must be identical to the way this material appears in the text of the thesis. The title of each chapter or section should be written in full capitals with no terminal punctuation. The title of a subdivision of a chapter or section should be in small letters, with the exception of the first letter of significant words. Dots between titles and page numbers are optional. Page numbers should be right justified (see sample table of contents, Appendix E).

If the chapters are extensively subdivided, Arabic numerals should be used to indicate each chapter or section with a decimal system being used to indicate the subdivisions. For example, 2.6 would indicate the sixth subdivision of the second chapter. If further subdivision is desirable, the same type of symbolization should be used. For example, 2.6.3 would indicate the third subdivision of the sixth section of the second chapter. Symbolization of this type is convenient, if frequent reference is made to particular parts of the thesis; otherwise, a division into sections and subsections without a detailed numerical classification is sufficient.

5.3.10 List of Tables

The list of tables follows the Table of Contents. This list includes the number of each table, the title, and the page number. It should have the same format as the Table of Contents.

5.3.11 List of Figures

The list of figures follows the list of tables. This list includes the number of each figure, the title, and the page number. It should have the same format as the Table of Contents.

5.3.12 List of Abbreviations

This list includes all non-standard abbreviations used in the text of the thesis. It follows the list of figures.

5.4.0 Body of Thesis

In the body of the thesis the author presents in an orderly fashion all relevant aspects of the research project for which the degree is to be granted. The research reported must be an accurate depiction of the work done. The research should be presented in an effective manner using clear and correct language. Credited references to other works will form part of the thesis. Acknowledgement of the work of others may take one of several forms. The idea may be written in the student's own words with the original author referenced. A direct quotation of less than three lines may be incorporated into the text using quotation marks. If the quotation is more than two lines, it should be

indented one and one half (1.5) centimetres from the left margin and typed in a single space format without quotation marks. Any borrowed thoughts, expressions, or use of non-original material must be acknowledged and documented.

The student and Supervisor should discuss the structure and organization of the body of the thesis. The body of the thesis should have a general introduction as the first chapter, one or several chapters describing the research done, and a final chapter consisting of a general discussion, conclusions, and future directions. The body of the thesis should be organized as one or a series of scientific papers. Papers published or submitted for publication may be used as chapters providing they are formatted in a manner consistent with the rest of the thesis (see section 5.0 below). The number and title of each chapter or section must be given in the same form as it appears in the table of contents. It should be centered on the page. The title (and number if used) of each subdivision should also be written as it appears in the table of contents. In this case, the number and title should be aligned with the main body of the text along the left-hand side of the page. The following is an example:

I. POST-PARTURIENT HEMOGLOBINURIA

1.1 Introduction.....

(Appendix E illustrates the correct use of the numbering system).

All titles should be concise but informative.

5.4.1 First Chapter of the Thesis - General Introduction

The first chapter of the thesis should introduce the topic and contain a statement of the objective(s) of the work so that the reader can understand the nature and aim of the study. A review of past work pertinent to the planned study is usually necessary in order to validate the importance of the problem, i.e., the reason for the author's interest in the problem.

5.4.2 Middle Chapters of Thesis

The text of each middle chapter is normally divided into sections with the following headings: Introduction, Materials and Methods, Results, and Discussion. Long sections may require subheadings to clarify their content.

5.4.2.1 Introduction

In the introduction clearly state the purpose of the chapter and summarize the pertinent literature and rationale for the experiment(s).

5.4.2.2 Materials and Methods

Describe clearly your selection of the observational or experimental subjects (patients or experimental animals, including controls). Identify the methods, apparatus (give the

manufacturer's name and address in parentheses) and procedures in sufficient detail to allow other workers to reproduce the methods. Give references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well known; describe new or substantially modified methods, give reasons for using them and evaluate their limitations.

Identify precisely all drugs and chemicals used, including generic name(s), dosage(s) and route(s) of administration (give the manufacturer's name and address in parentheses).

Include numbers of observations and the statistical methods and significance levels, when appropriate.

Experiments on animals shall follow the guidelines of the "Guide to the Care and Use of Experimental Animals", Volumes 1 and 2 (or its equivalent), and this must be stated in the Materials and Methods section. These guides are available from the Canadian Council on Animal Care, 151 Slater Street, Ottawa, Ontario K1P 5H3. (Website - http://www.ccac.ca/en/CCAC_Main.htm)

5.4.2.3 Results

Present your results in a logical sequence in the text, tables, and illustrations. Do not repeat in the text all of the data in the tables or illustrations; emphasize or summarize only important observations from tables or figures.

5.4.2.4 Discussion

Emphasize the new and important aspects of the study and the conclusions that follow from them. Do not repeat in detail data given in the Results section. Include in the Discussion the implications of the findings and their limitations, and relate the observations to other relevant studies. Link the conclusions with the goals of the study, but avoid unqualified statements and conclusions not completely supported by your data. Avoid claiming priority and alluding to work that has not been completed.

State new hypotheses when warranted, but clearly label them as such. Recommendations, when appropriate, may be included.

5.4.3 Final Chapter

The final chapter should consist of a general discussion, conclusions, and recommended future directions for the research topic.

5.5.0 Inclusion of Material from Published Manuscripts

Neither a collection of manuscripts nor a collection of reprints of published manuscripts are acceptable as a thesis. Papers published or submitted for publication may be used as chapters providing they are formatted in a manner consistent with the rest of the thesis and provided that, in the opinion of the Supervisory Committee, the research described in the manuscripts was conducted under the supervision of the Supervisor

while the student was registered in a graduate program at the University of Prince Edward Island. In this case, a footnote to the page starting the chapter will provide the order list of authors, the title, and the name of the journal (and the volume number, page numbers and year, if available). Manuscripts in which the student is not senior author require an addition to the footnote to indicate the data that is part of the student's contribution. The student must have actively participated in data analysis, interpretation and writing of the manuscript. Any reference to manuscripts in the thesis should be by chapters and not as published documents.

5.6.0 Guidelines for thesis content – originality, time period, and collaborations.

5.6.1 General Principles

The thesis must be the student's own work, both in the writing and in the research, and show originality and independence.

The thesis should be an accurate record of the work carried out during the time period over which the student was registered for the degree being sought. Work completed prior to that time should not be included in the thesis. Previously published work done by the author may be referenced in the thesis in the traditional manner. Previously unpublished work by the author that may be pertinent to the thesis may be placed into an Appendix of the thesis at the discretion of the Supervisory Committee.

The thesis must accurately acknowledge collaborative research. The nature of biomedical and health-related research has changed considerably over the past two decades. In particular, changes in the funding and research landscape have enhanced collaborative and group research. Group research often makes it difficult to assess the appropriate thesis content for particular individuals within a group.

Collaborations are a natural and important part of a student's research experience and should be encouraged. In most cases of formal collaborations, the data generated as part of the collaboration will be included in the thesis if it pertains and contributes directly to the thesis topic. Formal collaborations are expected to have arisen as the result of extensive discussions among the student, the supervisor, and the collaborator(s), with the knowledge of the student's Supervisory Committee. Graduate students will be involved in collaborative research activity, in both formal and informal ways, and they must keep records documenting the respective contributions to the collaborative studies. Formal collaborations may occur between students and/or post-doctoral fellows under the same supervisor or between students, post-doctoral fellows, and faculty members from other laboratories, departments, or universities. In a formal collaborative project, there may be common shared data but there must be a subset of data or analysis that is unique to the student and relevant to the thesis work if it is to be included in the student's thesis. The laboratory records should be retained to demonstrate the student's contribution. Only the student's own work should be included in the thesis.

5.6.2 Specific Thesis Content Guidelines

The following guidelines describe the means to indicate originality and time period and to properly acknowledge results of collaborative research in the thesis.

5.6.2.1 Taking Intellectual Responsibility for the Content

The student must be prepared to take intellectual responsibility for all data that are included in the thesis. That is, the student must understand how samples were collected, how outside analyses were conducted, and what limitations apply to the results. For example, when a commercial laboratory or a commercial kit is used, the student must understand the principles and parameters of the assays employed particularly as they pertain to the reliability of the results included in their thesis.

5.6.2.2 Specification of Collaborative Work

When a student collaborates with another student, postdoctoral fellow, or faculty member to collect data, several considerations are necessary. In every experiment for which collaborative data is included in the Results section of the thesis, the student must have made an original contribution to the data. Any data that is shared must be clearly specified with an indication of who contributed to the collection of the data. The complete set of data from an experiment, or an analysis of a database in the case of an epidemiological study, must not appear in more than one thesis (Honours, Masters, or PhD).

5.6.2.3 Acknowledging Research Support

The provision of technical support or research assistance is common in the completion of repetitive experiments or in the collection of data in large epidemiological studies. Such support should be acknowledged in the thesis. The student must take intellectual responsibility for the experimental design and execution of the experiments or research conducted by technicians or research assistants under their supervision.

5.6.2.4 Use of Previously Collected Material

The use of previously collected samples (experimental or in the course of clinical/epidemiological studies) for further analysis (experimental, analytical, data for epidemiological studies) is acceptable and where appropriate, encouraged, as it is often a wise use of resources and may reduce the use of animals. All such use of previously collected samples or data should be within the context of rigorous scientific method and study design and the student is responsible for ensuring that appropriate scientific standards were met in the collection of the samples. The details of how samples were collected or prepared must be included in the thesis, and the source of the samples must be clearly indicated so that the student's role in sampling and analysis is clear. The student must understand the procedures used in the collection of samples and in any relevant analyses previously conducted on the samples.

5.6.2.5 Incorporating Published or Submitted Papers

When incorporating published or submitted papers, or portions thereof, into theses, all copyrights should be respected. A paper may only appear "as published" in one thesis, as the thesis must represent the original work of the student and two students can therefore not take credit for the same work in their theses. Inclusion of papers or sections of a thesis in more than one thesis is not appropriate and may lead to a real or perceived violation of the Academic Regulation on Academic Dishonesty.

A paper should only be presented "as published" if the student was primarily responsible for writing the paper and generating the data presented in the paper and provided the paper meets the other requirements noted above. Otherwise, the student should only include the portions of the paper for which they are responsible in the thesis. Other data that is relevant to the discussion of their own data should be cited in the Discussion section of the chapter or thesis.

5.7.0 Abbreviations and Units of Measurement

Use only standard abbreviations appropriate to your discipline and be consistent throughout the thesis. Avoid abbreviations in the title and at the beginning of a sentence. The full term for which an abbreviation stands should precede its first use in the text unless it is a standard unit of measurement. In Canada the International System of Units (SI) is standard.

5.8.0 References

The reference list must contain every reference cited, mentioned, or used in the text of the thesis. References not cited must not be listed. List references consecutively in the order in which they are first mentioned. Identify references in text, tables and legends by Arabic numerals or by author and year (in parentheses). The same reference style must be used throughout the thesis. References cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of the particular table or illustration.

The titles of journals should be abbreviated according to the style used in *Index Medicus*; consult the "List of Journals Indexed", which is printed annually in the January issue of **Index Medicus**.

Try to avoid using abstracts as references; "unpublished observations" and "personal communications" may not be used as references, although references to written, not verbal, communications may be inserted (in parentheses) in the text. Include among the references manuscripts accepted but not yet published; specify the journal or book and add "in press" (in parentheses). Information from manuscripts submitted but not yet accepted should be cited in the text as "unpublished observations" (in parentheses).

The references must be verified by the author(s) against the original documents. Particular attention should be given to the accuracy of bibliographical references.

Use the form of references adopted by the National Library of Medicine in the United States and used in **Index Medicus**. Examples of references in the correct form follow:

Reference style for journal articles, books and other monographs should be consistent throughout the thesis and requires the approval of the Supervisory Committee.

5.8.1 Journal Articles

References to journal articles must include the following: names and initials of all authors, the full title of the article, the title of the journal according to the style used in **Index Medicus**, the volume, first and last page number, and year of publication.

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References to books and monographs must include the following: names and initials of all authors, names and initials of all editors, full title of the book (and chapter when appropriate), the edition of the book when appropriate, the publisher, the place and year of publication and the first and last page numbers of the relevant section.

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Appendices should be used to present detailed material pertinent to the thesis but not essential to an understanding of the work which the student has done. Examples of material that may be included in an appendix are: the design of a significant piece of equipment, the composition of particular buffers or other solutions, lengthy tabulations of raw data (for analysis, figures, or tables), or computer programs. Journal articles should not be included in the appendix. The student should consult with his/her Supervisor concerning material of this type that should be placed in the appendices rather than in the text.

When appendices are included in the thesis, they are usually placed after the final chapter. The titles of the appendices are listed in the Table of Contents, and they are designated as APPENDIX A, APPENDIX B, and so on. The pages on which the appendices appear are numbered consecutively with those for the main portion of the thesis.

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**ERYTHROCYTE METABOLISM IN
PHOSPHORUS-DEFICIENT SHEEP**

BY

JOHN P. SMITH

A Thesis
Submitted to the Graduate Faculty
in Partial Fulfilment of the Requirements
for the Degree of

DOCTOR OF PHILOSOPHY

Department of Pathology and Microbiology
Faculty of Veterinary Medicine
University of Prince Edward Island

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Date _____

APPENDIX E

Example Table of Contents and Numbering System

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APPENDIX F

Example of Figure and legend

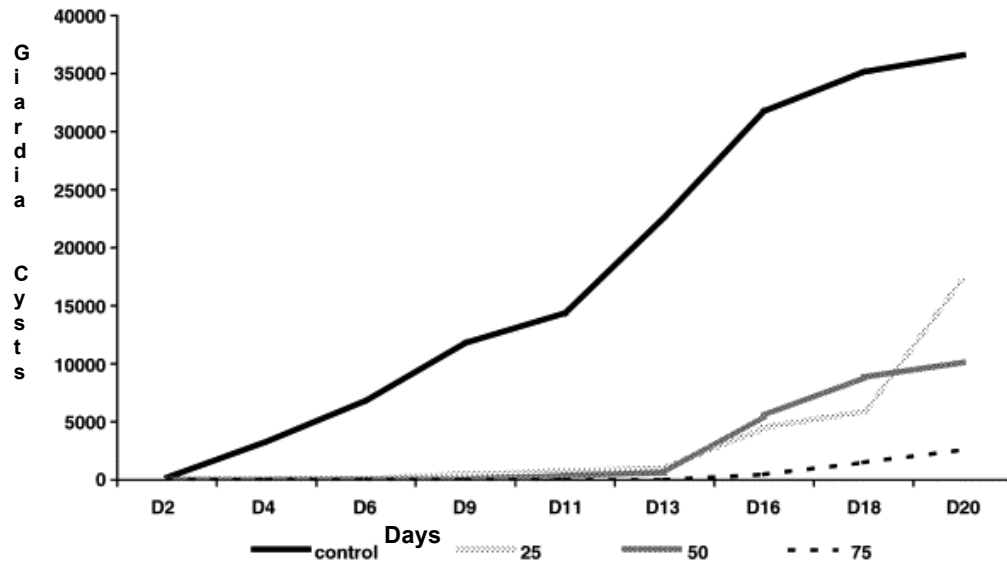


Figure 1. The geometric mean cumulative *Giardia* cyst excretion in calves after treatment with ProductX at 25 mg/kg (25), 50 mg/kg (50), 75 mg/kg (75) and in the control group.

APPENDIX G

Example of Table

Table 1. Comparisons between the mean numbers of infective larvae subsequently recovered from ovine faecal samples following their prior exposure to cold temperature for various time intervals.

Parasite	Days Larvae Exposed to 4°C *				
	0	1	3	7	12
Haemonchus	1156 ± 333 ^a	825 ± 251 ^a	594 ± 167 ^{ab}	594 ± 167 ^{bc}	4 ± 1 ^c
Cooperia	1115 ± 123 ^a	721 ± 99 ^b	508 ± 72 ^b	508 ± 72 ^c	21 ± 3 ^c
Ostertagia	182 ± 32 ^a	165 ± 31 ^a	172 ± 38 ^a	172 ± 38 ^{ab}	53 ± 9 ^b

* Values expressed as the mean ± standard error; n = 34 faecal samples for each time interval.

^{abc} Means followed by different superscripts (reading horizontally) are significantly different (p<0.05)