

UNDERGRADUATE THESIS

GUIDELINES

**DEPARTMENT OF GEOGRAPHY
BRANDON UNIVERSITY**



**BRANDON
UNIVERSITY**

Founded 1899

PERTAINING TO 38:449 UNDERGRADUATE THESIS IN GEOGRAPHY

September 2011

TABLE OF CONTENTS

1. PURPOSE OF HONOURS THESIS.....	3
2. PROCEDURE FOR REGISTRATION IN THE HONOURS THESIS.....	3
3. THESIS SYLE GUIDELINES.....	5
3.1 Contents and Organisation.....	5
3.2 General Format and Style.....	6
3.2.1 Margins.....	6
3.2.2 Line Spacing, Justification and Indents	6
3.2.3 Font.....	6
3.2.4 Symbols.....	6
3.2.5 Units and Measures.....	6
3.2.6 Equations.....	6
3.2.7 Headings.....	7
3.2.8 Page Numbering.....	7
3.2.9 Spelling.....	7
3.2.10 Latin Terms.....	7
3.2.11 Figures.....	8
3.2.12 Tables.....	8
3.2.13 References.....	9
3.2.14 Appendices.....	9
Appendix A: Criteria for evaluating the Undergraduate Thesis in Geography.....	10
Appendix B: Title Page Example.....	11
Appendix C: Table of Contents Example.....	12
Appendix D: List of Figures Example.....	13
Appendix E: List of Tables Example.....	14

1. PURPOSE OF THE HONOURS THESIS

An Honours Thesis is a written document that presents the results of an independent research project aimed at addressing a practical problem or issue in geography. The thesis should demonstrate the student's competence in completing an independent research project; this includes a demonstration that the student is conversant with the relevant literature and has applied methods appropriate to the specific field of geography under investigation. The thesis may entail cooperation with agencies in the community at large and with other departments at Brandon University.

The purpose of the thesis is to: (1) develop the student's skills and abilities to conduct theoretical and/or applied research in geography; and (2) develop expertise in preparing clear and concise research reports useful for decision-making. Students are expected to work closely with a faculty member to identify research topics and secure financial support for a research project, if necessary.

2. PROCEDURE FOR REGISTRATION IN THE HONOURS THESIS

Admission to the Honours Thesis in Geography course (38:449) is open only to 4-year Honours students who will normally register for this course in their final year of studies, starting in September. In rare instances a starting date in January can be arranged (*i.e.* the student will register for January 1 to the final day of exams in December).

Students may enrol in the Honours Program once they have completed 12 Geography credit hours and a total of 30 credit hours. Students planning to register in Honours Thesis in Geography (38:449) are encouraged to declare their intent by the conclusion of the first term of the academic year preceding that in which the Honours Thesis will be undertaken. Before this date, the student should consult with the Department of Geography Honours Coordinator to discuss eligibility for the program and area of research interest, and select a potential Supervisor; the Supervisor must be a member of the Department of Geography. A grade point average of 3.0 in Geography is required for acceptance to the Honours Thesis in Geography (38:449).

Following consultation with the Honours Coordinator, the student should meet with the potential Supervisor to ascertain whether he/she can accommodate an Honours Thesis student in the following academic year. If so, a potential research project can be discussed at this point.

Upon provisional acceptance by the potential Supervisor, the student must submit a letter of intent to the Honours Coordinator, including a brief description of the proposed research project. The proposal should include background and rationale for the project plus some indication of methods to be followed to answer the research question.

Upon official acceptance, a Second Reader for the thesis will be identified. The Second Reader will also usually be a member of the Department of Geography. Both the Supervisor and Second Reader will read and grade the thesis.

A Directed Readings course (38:488) or Practicum (38:366/38:466) may be associated with collection of data or background literature for the thesis but cannot constitute more than 20% of the final Honours Thesis document. Students should attempt, if at all possible, to collect much of the raw data for the thesis in the winter/summer preceding registration.

Honours students will be required to give a Departmental Seminar on their research topic during the Fall Semester in which they are registered in the Honours Thesis. The Seminar should include the objective(s) of the thesis, methods and progress to-date. Students who have completed a significant portion of the thesis may make a presentation at the annual meeting of the Prairie Division of the Canadian Association of Geographers (usually in late September) in lieu of the seminar.

Honours students are required to give a second Departmental Seminar, Science Faculty Seminar, or on their research following the Winter Semester mid-term break of the academic year in which they are registered. The Seminar will present the final results of the Thesis.

A final draft of the Thesis must be submitted for evaluation by the last day of the exam period in April. Final edits may still occur following this submission.

Evaluation of the Thesis will be based on the following elements (values approximate):

Research design / methods	20%
Field work / data collection	30%
Presentations	10%
Final thesis	40%

The Thesis will be assigned a letter grade. Criteria to attain each grade are presented in Appendix A.

Once the final version of the Thesis is completed, the Student should submit three (3) copies of the Thesis to be bound by the Department (one for the student, one for the Supervisor, and one for the Department of Geography). Further bound copies will at the expense of the student.

3. THESIS STYLE GUIDELINES

3.1 Contents and Organisation

The following items must be included in the order listed:

1. **Title Page:** The title page must conform to the example provided (Appendix B).
2. **Approval Page:** The approval page is available on the Department website.
3. **Abstract:** The purpose of an abstract is to concisely state the purpose, methods and results of the study in a concise paragraph or two. The abstract must conform to the guidelines for text specified below.
4. **Acknowledgements:** Acknowledgements are expected to include all people / agencies who helped in the production of the Thesis, including funding sources, if any. The acknowledgements must conform to the guidelines for text specified below.
5. **Dedication:** A dedication is optional. The dedication must conform to the guidelines for text specified below.
6. **Table of Contents:** The table of contents must conform to the example provided (Appendix C) and list all material within the Thesis beginning with the Abstract. Font style of items listed within the table of contents should be the same as the font used within the text (*i.e.* headings listed within the table of contents are in the same font style as they appear in the body of the thesis).
7. **List of Figures:** The list of figures must conform to the example provided (Appendix D) and include all figures (*i.e.* illustrations, photographs, charts and maps) within the body of the thesis, listed by figure number and caption.
8. **List of Tables:** The list of tables must conform to the example provided (Appendix E) and include all tables within the body of the thesis listed by table number and caption.
9. **Body of Thesis:** All text within the thesis must conform to the guidelines set out in the following sections.
10. **References:** Referencing format must follow the Canadian Association of Geographers style guidelines. These can be found under “Citations” and “References” at:
http://www.cag-acg.ca/files/pdf/TCG/New_style_guide_eng_2010.pdf
11. **Appendices:** All appendices included must be listed according to the appendix letter as they appear within the Thesis.

3.2 General Format and Style

3.2.1 Margins

For all pages, including those with figures and tables, the left hand margin will be 3.5 cm (1.5 in.) and all other page margins will be 2.5 cm (1 in.).

3.2.2 Line Spacing, Justification and Indents

All text in abstract, acknowledgements, dedication and body of the text is double-spaced. Table of Contents and Lists of Figures and Tables are single-spaced. Reference lists are single-spaced with a space between each reference. Quotations longer than two lines are indented 1.5 cm (0.5 in.) from both left and right margins, and single-spaced. All text in paragraph form is fully justified. First line indents are 1.5 cm (0.5 in.).

3.2.3 Font

All text throughout the body of the thesis is Times New Roman, 12 pt. Text within figures, charts and other raster or vector graphics should be of a font type and size that is consistent with standard cartographic principles. For tables, font type may be other than Times New Roman (*e.g.* Arial) and size must be at least 8 point. Words that are not in English (*e.g.* Latin names, species scientific names) and the titles of books should be italicised.

3.2.4 Symbols

A standard font for symbols and mathematical notation should be used.

3.2.5 Units and Measures

All units of measure and nomenclature should follow the International System of Units (SI units). Use correct SI unit abbreviations (*e.g.* s, min, h, cm, km, NOT sec, hr, Km, or KM). Insert a hard space between values and units of measure (*e.g.* 1200 km, NOT 1200km).

3.2.6 Equations

All equations should be indented and numbered by chapter and equation number consecutively; for example, “(Equation 4.1)”, where the number 4 represents the chapter number and 1 indicates that this is the first equation within chapter 4. The parentheses are required. Equation numbers should be right justified.

3.2.7 Headings

All chapter titles and headings should follow these examples:

1. CHAPTER TITLE

Upper Case, Bold, 12 Point, left-justified.

1.1 First Level Heading

Lower Case, Bold, 12 Point, left-justified.

1.1.1 Second Level Heading

Lower Case, Normal, Underlined, 12 Point, left-justified.

3.2.8 Page Numbering

All pages, except the title page, are numbered in the lower margin 1.25 cm or 0.5 inches from the bottom of the page and centred between the left and right page margins. Pagination begins with the Approval Page, which is page ii. All other front matter is numbered in lower case Roman numerals (*e.g.* ii, iii, iv, v, vi, vii, etc.). The body of the thesis, references, and appendices are numbered in Arabic numerals starting with page 1 and continuing until the last page of the thesis.

3.2.9 Spelling

Spelling should follow that of the Oxford English Dictionary. Canadian spelling, unless part of a proper noun, formal name, or part of a quotation, should be used.

3.2.10 Latin Terms

The following Latin terms are acceptable within the Thesis. Do not use the term “*etc.*” Latin terms are always given in italics.

e.g. *exempli gratia*, “For example”. Used to start a list of examples to either: 1) further explain a point made in the Thesis, or 2) provide some examples of references that provide the information that requires citation.

i.e. *id est*, “That is to say”. Used to precede a point of further explanation.

sensu “In the sense of”. Used prior to a citation to indicate that you are referring to an idea or a manner previously accorded to someone else, *e.g.* (*sensu* MacDonald 2003).

<i>et al.</i>	<i>et alia</i> , “and others”. Used for in-text citations that have more than two authors. For example, (Smith <i>et al.</i> 2004).
<i>a priori</i>	“from what comes before”. Used to refer to theoretical or research design ideas that are made before the research, without being based on research itself. Hypotheses are made <i>a priori</i> to actual research.
<i>a posteriori</i>	“from what comes later”. Can be used to refer to a fact or process that is known from experience or from factual data.

3.2.11 Figures

A figure is any graphic illustration, map, photograph or chart (*e.g.* bar, pie). Figures should be numbered consecutively by chapter and figure number, as in Figure 4.1, where the number 4 represents the chapter number and number 1 indicates that this is the first figure within Chapter 4. Figures appearing alone on a page do not require a neatline. Figures appearing in-line with text will normally have a neatline with the figure number appearing outside the neatline at the lower left of the figure. The figure number should be followed by a colon and a brief, descriptive caption. If not an original figure, the source of the figure should appear at the end of the caption. For example: Figure 4.1: Pleistocene geomorphology of south-western Manitoba (Elson 1952).

Figures may be placed on the page in portrait or landscape orientation and may appear on a single page or in-line with the text depending on the size of the figure. Figures should follow the page or paragraph in which they are first referred.

Regardless of format or type, all figures must be clearly legible at the size required for inclusion within the thesis. Normally, graphics should be no less than 300 dpi and line work within vector graphics no less than 1-point width.

N.B. Maps must be created by the student. Imported graphics or maps from the internet are not acceptable. Scanned figures of models, from published literature, may be included when properly referenced.

3.2.12 Tables

Tables should be numbered consecutively by chapter and table number, as in Table 2.1, where the number 2 represents the chapter number and number 1 indicates that this is the first table within Chapter 2. Table numbers should be at the upper left of the table and separated from the table itself by a space. The table number should be followed by a colon and a brief, descriptive caption. If not an original table, the source of the table should appear at the end of the title and the table should be redrafted. For example: Table 2.3: Economic growth in the Canadian North (Statistics Canada 1996).

Tables may be placed on the page in portrait or landscape orientation and may appear on a single page or in-line with the text depending on the size of the table. Tables should follow the page or paragraph in which they are first referred. All tables within the Thesis should follow a consistent format.

3.2.13 References

The author, date system of referencing is used for in-text citations (i.e. not footnotes). The Reference list should contain ALL referenced publications, web pages, and personal communications alphabetically by first author. A reference should not appear in the reference list if it is not cited in the body of the Thesis.

Specific referencing format must follow the Canadian Association of Geographers style guidelines. These can be found under “Citations” and “References” at:

http://www.cag-acg.ca/files/pdf/TCG/New_style_guide_eng_2010.pdf

3.2.14 Appendices

Appendices should be labelled by ascending letters, as listed in the body of the Thesis (e.g. A, B, C, ...). Appendices include a title, in bold, left justified at the top of the page.

Appendix A: Criteria for Evaluating the Undergraduate Thesis in Geography

A+	Exceptional	Thorough knowledge of concepts and/or techniques and exceptional skill or great originality in the use of these concepts/techniques.
A/A-	Excellent	Thorough knowledge of concepts and/or techniques together with a high degree of skill and/or some elements of originality.
B+	Very Good	Thorough knowledge of concepts and/or techniques together with a fairly high degree of skill in the use of these concepts/techniques.
B/B-	Good	Good level of knowledge of concepts and/or techniques together with considerable skill in using them.
C+	Competent	Acceptable level of knowledge of concepts and/or techniques together with considerable skill in using them.
C/C-	Fairly Competent	Acceptable level of knowledge of concepts and/or techniques together with some skill in using them.
D	Barely Passing	Slightly better than minimal knowledge together with some ability to use them.
F	Fail	Less than acceptable level of knowledge of required concepts and/or techniques together with less than acceptable ability to use them

Appendix B: Title Page Example

DEVELOPMENT OF WHALE-WATCHING REGULATIONS IN CHURCHILL, MANITOBA, CANADA

By:

Heather C. Penner

In Partial Fulfilment of the Requirements for
38:449 Undergraduate Thesis in Geography

Department of Geography

Brandon University

April 30, 2007

Appendix C: Table of Contents Example

TABLE OF CONTENTS

ABSTRACT	vi
ACKNOWLEDGEMENTS	vv
LIST OF FIGURES	vii
LIST OF TABLES	viii
CHAPTER 1 – INTRODUCTION	1
1.1 Objectives	2
CHAPTER 2 – THEORETICAL CONSIDERATIONS	3
2.1 Historical Development and Overview of Global Whale-watching Management	3
2.2 National/Regional Whale-watching Management and Research	7
2.2.1 United States	7
2.2.2 Australia	10
2.2.3 New Zealand	15
2.2.4 Europe	17
2.2.5 Canada	19
2.2.6 Churchill, MB	26
2.3 General Ecology of Beluga Whales	26
2.4 Whale-watching Research on Belugas	29
CHAPTER 3 – METHODS	32
3.1 Field Site and Study Population	32
3.2 Characteristics of Study Subjects	33
3.3 Data Collection	33
3.3.1 Passenger Vessel	34
3.3.2 Kayak	36
3.3.3 Zodiac/snorkeling	37
CHAPTER 4 – RESULTS	38
4.1 Interviews	38
4.2 Beluga Behaviour	39
4.2.1 Passenger Vessel	39
4.2.2 Kayak	45
4.2.3 Zodiac/snorkeling	46
4.3 Track Recordings	48
CHAPTER 5 – DISCUSSION/RECOMMENDATIONS	52
5.1 Interviews	52
5.2 Beluga Behaviour	53
5.3 Recommendations	57
CHAPTER 6 – CONCLUSION	61
REFERENCES	62

Appendix D: List of Figures Example

LIST OF FIGURES

Figure 2.1	Geographic distribution of beluga whales.....	27
Figure 2.2	Beluga summer and winter distribution ranges in Canadian waters, and estimates of beluga populations in Canada.....	29
Figure 2.3	Migration of beluga populations.....	30
Figure 3.1	Study site.....	32
Figure 4.1	Percentage of behaviour type by distance zone for the entire sample.....	40
Figure 4.2	Percentage of behaviour type by distance zone for calf groups.....	41
Figure 4.3	Percentage of behaviour type by distance zone for juvenile groups.....	41
Figure 4.4	Percentage of behaviour type by distance zone for adult/mix groups.....	42
Figure 4.5	Percentage of group type by distanced zone.....	45
Figure 4.6	Percentage of behaviour by group type for kayaks.....	46
Figure 4.7	Percentage of behaviour by group type for zodiacs/snorkelling.....	47
Figure 4.8	Vessel track recordings for whale-watching trips conducted in 2005 and 2006.....	49
Figure 4.9	Track recordings for whale-watching trips conducted on the kayaks in 2006.....	50
Figure 4.10	Track recordings for whale-watching trips conducted on the snorkelling zodiacs in 2006.....	51
Figure 5.1	Recommended caution zones and travel corridor for the Churchill River.....	60

Appendix E: List of Tables Example

LIST OF TABLES

Table 2.1	Estimated growth of global whale-watching.....	4
Table 2.2	Type of whale-watching management protocol.....	6
Table 2.3	The number of commercial whale-watching companies for each Canadian province where whale-watching occurs and the species they target for viewing	21
Table 3.1	Classification scheme for group type.....	34
Table 3.2	Classification scheme for behaviour.....	34
Table 4.1	Completed and uncompleted focal follows for 2005 and 2006.....	39
Table 4.2	Chi-square values for behaviour type by distance zone for the entire sample and each individual group type for 2005 and 2006....	43
Table 4.3	Completed and uncompleted follows for kayaks for 2006.....	45
Table 4.4	Completed and uncompleted follows for snorkeling zodiacs for 2006.....	47