REGULATIONS AND GUIDELINES
FOR THE PREPARATION AND SUBMISSION
OF
GRADUATE MASTER’S THESES
PhD DISSERTATIONS
AND REPORTS

University of New Brunswick

SCHOOL OF GRADUATE STUDIES

Revised 2013
I. INTRODUCTION
II. GENERAL INFORMATION
   1. Number of Copies
      (a) Library Access to Thesis/Dissertation
      (b) External Microfilming
   5. Costs
III. ORDER OF CONTENTS
   1. Traditional or Articles Format
   2. Page Order
      (a) Traditional Format
      (b) Articles Format
   3. Multi-volume Theses/Dissertations
IV. FORMAT AND STYLE
   1. Language and Spelling
   2. Typing and Printing
   3. Paper
   4. Margins
   5. Illustrations
      (a) Tables and Figures
      (b) Photographs
      (c) Maps
      (d) Line Diagrams and Equations
   6. Page Numbering
   7. Footnotes
   8. Bibliographic Form
   9. Appendices
V. PLAGIARISM AND COPYRIGHT
   1. Plagiarism
   2. Copyright
VI. IMAGING SERVICES INFORMATION
APPENDICES
APPENDIX I - SELECTION OF GUIDES FOR WRITING GRADUATE THESES, DISSERTATIONS AND REPORTS
APPENDIX II - CORRECT FORM FOR CURRICULUM VITAE
APPENDIX III - SAMPLE TITLE PAGE
APPENDIX IV - UNIVERSITY LIBRARY RELEASE FORM
APPENDIX V – NON-EXCLUSIVE LICENCE TO REPRODUCE THESES
APPENDIX VI- SAMPLE TABLE OF CONTENTS
CHECKLIST FOR STUDENTS SUBMITTING FINAL COPIES
1. INTRODUCTION

These guidelines will help you prepare your thesis/dissertation/report according to sound academic standards and, thereby, avoid unnecessary delays in having it accepted by the Graduate School. Although some of the following rules may seem tedious, all of them have a specific purpose. For instance, the emphasis on clear type and standard format is to ensure that a copy of your thesis/dissertation/report can be made available to other scholars in your discipline through the Harriet Irving Library and the National Library of Canada. Since neither institution accepts substandard theses/dissertations/reports, then it is to your advantage to take pains in the preparation and presentation of your work.

While the following guidelines are the standard for all departments and graduate academic units (GAU), there may be some variation in your own department. Please consult with your Director of Graduate Studies before beginning work on the final draft of the thesis/dissertation/report. A selection of style manuals is given in Appendix I and consultation with the Reference Librarian may provide valuable advice.

NOTE: These regulations and guidelines apply to both theses, dissertations and reports completed at the graduate level.

II. GENERAL INFORMATION

1. Number of Copies

The Graduate School requires that you submit 2 copies (original + 1 copy) of your thesis/dissertation/report in order to fulfill your degree requirements (following its approval by the GAU &/or Supervisor). The School of Graduate Studies & UNB Library covers the binding costs of the 2 required copies only. If you submit one copy electronically through the Electronic Theses & Dissertations website, the Graduate School only requires one “original” copy. All copies should be unbound but otherwise complete. Some GAUs may require a copy, hence you should consult with your supervisor and the Director of Graduate Studies. If you wish to have personal copies bound, you must submit all photocopies of your thesis/dissertation/report (including “pink” Personal Binding Form with your payment) directly to the Circulation Desk at the Harriet Irving Library. All personal binding costs (including the Supervisor(s) or Examining Board members) are your responsibility.


The final disposition of the copies will normally be as follows:

(a) Original - University Library
(b) First Copy - Candidate's GAU or Branch Library


(a) Library Access to Thesis/Dissertation/Report

The University Library Release form (Appendix IV), allows you to select either (a)
general release, or (b) restricted use of the thesis/dissertation/report. In the latter case, where you may wish to impose a restriction on the lending or use of the thesis/dissertation/report, with the support of your supervisor, you must justify such a restriction to the Dean of Graduate Studies. The maximum period for which access may be restricted is four years.

(b) **External Microfilming**

University theses/dissertations/reports are microfilmed by Micromedia Ltd. for the National Library of Canada. Microfiche copies will be submitted to University Microfilms International to allow listing in Dissertation Abstracts International. You may give permission for microfilming by completing the appropriate release form (Appendix V), which will be available immediately after the successful completion of the oral examination.

*NOTE: A thesis/dissertation/report is likely to be rejected for microfilming by the National Library unless it follows these guidelines.*

### 4. Thesis/Dissertation/Report Title

Your thesis/dissertation/report will be a valuable reference for other scholars only if it can be easily located within libraries. Retrieval systems use the key words in the title to locate theses/dissertations/reports. It is essential that the title be meaningful and descriptive of the content of the work. If possible use word substitutes for formulae, symbols, superscripts, subscripts, Greek letters, etc. in the title. The thesis title should be kept as short as possible since it has to be printed on the spine of the bound copy.

### 5. Costs

The full costs of producing (typing, reproducing, photography, binding) a thesis/dissertation/report are your responsibility. It is also your responsibility to ensure that, before leaving the university, the binding charges for all copies of the thesis/dissertation/report have been paid in full. These costs are subject to change and current charges can be obtained from the School of Graduate Studies at UNB. When the thesis/dissertation/report has been accepted by the School of Graduate Studies, instructions will be given to proceed with the binding of the required number of copies.

### III. ORDER OF CONTENTS

1. **Traditional or Articles Format**

Theses/dissertations may follow either a "traditional" or an "articles" format.
2. Page Order

(a) Traditional Format

- Frontispiece or Quote Page facing the title page (if any)
- Title Page (see Appendix III to these guidelines)
- Abstract (not more than 350 words for the doctoral degree and not more than 150 words for the Masters degree). For any thesis written in a language other than English, an abstract in English must precede an abstract in the language of the thesis
- Dedication (if any)
- Preface (if any)
- Acknowledgment (if any) should be listed with the prefatory pages only, not in each paper when these are included in the text
- Table of Contents (must include your abstract, dedication, preface and acknowledgement pages in small Roman numerals as well as listing chapter heads and subheads, bibliography or list of works cited and appendices). See sample in Appendix VI to these guidelines.
- List of Tables (if any)
- List of Figures or Illustrations (if any)
- List of Plates (if any)
- List of Symbols, Nomenclature or Abbreviations (if any)
- Body of the Text with footnotes (if any) and Bibliography or list of references.
  Text should present the purpose, methods and scope of the investigation. It should also set out the extent to which the investigation is complete and the conclusions reached. It may also outline possibilities for further research. The length in the body of PhD dissertations should normally not exceed 400 pages of approximately 100,000 words.
- Appendices (if any) may contain details of methodology, tabulated data, etc., not provided in detail in the body of the text
- Curriculum Vitae or CV (see Appendix II to these guidelines) has no page number.

(b) Articles-format Theses/Dissertations:

- Both the Master’s thesis and the Doctoral dissertation may be presented in articles-format.

- There are no limitations on the number of articles required for either the Master’s thesis or for the PhD dissertation.

- In addition to the articles, the thesis/dissertation contain an introductory chapter that establishes the student’s familiarity with the field, sets out the objectives of the thesis/dissertation, places the research in the larger context of the candidate’s discipline, and explains the overall thematic cohesiveness of the articles. This
chapter should identify research patterns in the area, reviewing previous publications and current research. It should also include a detailed analysis of how the articles included in the text address the question/topic being studied, and how the articles each contribute to the study. Any errata or discussion of the articles can be included in the introductory chapter, the concluding chapter, or in a footnote/endnote in the dissertation.

- The articles-format of the thesis/dissertation must conform to the School of Graduate Studies’ Regulations and Guidelines for the Preparation and Submission of Graduate Reports, Theses, and Dissertations (available in paper and on the SGS website).

- The thesis/dissertation normally contains a final chapter (general discussion and conclusions) that should relate the articles to the relevant disciplines or field of study. It might also set out recommendations for future research or contain implications for professional practice.

- Both the introductory and final chapters should have their own footnotes/endnotes and/or list of references.

- There is no requirement to publish the articles, or to have submitted the articles for publication, prior to the SGS oral defence.

- As outlined in the SGS Regulations and Guidelines for the Preparation and Submission of Graduate Reports, Theses, and Dissertations, candidates should indicate the name(s) of journals in which articles have been published or to which the articles will be submitted in the future.

- The student in multiple-authored article(s) be the principal author or co-author. The student must provide a clear statement in the introduction describing the contribution made by him or her in each of the research and writing stages. The statement on co-authorship should specifically address contributions made in i) identification and design of the research proposal, ii) practical aspects of the research, iii) data analysis, and iv) manuscript preparation. In the case of joint authorship, an explanatory part of the thesis/dissertation text must outline the nature of the candidate’s contribution to each publication included in the thesis/dissertation;

- The thesis/dissertation should be based on research that the student has conducted while enrolled as a graduate student at UNB;

- The decision on the number and quality of articles should be the responsibility of the Supervisory Committee.

- The thesis/dissertation must meet internal GAU requirements prior to being sent to the Examining Board;
In the event an article has appeared (or will appear) in a journal where the supervisor serves as editor or is active on the editorial board, the *Completion of GAU Requirements for Degree* form should indicate that s/he has not been involved in the review process; and

- The student must demonstrate that he or she has the right to include a published article in the thesis/dissertation. For articles which have been published, students should include a letter of permission from the journal in the appendix of the thesis/dissertation.

The Articles-Format Thesis/Dissertation section was approved by the Executive Committee of the School of Graduate Studies, April 14, 2005.

3. **Multi-volume Theses/Dissertations**

If there is no way to avoid extending your thesis/dissertation to more than one volume, then the following guidelines apply:

- each volume must have its own prefatory pages.
- the title page and abstract page(s) must be in the first volume.
- volume 1 must have a table of contents as well as a list of tables and a list of figures, etc., for the entire thesis/dissertation.
- each additional volume must contain a duplicate of the title page in the first volume.
- the page numbering of the body of the thesis/dissertation must flow consecutively from one volume to the next.
- for traditional-format theses/dissertations the bibliography and appendices for all volumes will normally be at the end of the last volume and referred to in the table of contents of each volume.
- for theses/dissertations which consist of separate articles, the appendices for all volumes/articles are to be at the end of the last volume and referred to in the table of contents. References and bibliographies will follow individual chapters, in the appropriate volumes.
- when the appendices are bound in a separate volume, this volume must have a title page, duplicating that of the main volume but with addition of the word of “Appendix” or "Appendices" just below the title of the thesis/dissertation. The word "Appendix" or "Appendices" as well as the short title must then appear on the spine. Numbering of the appendices must flow in sequence from the first volume.
IV. FORMAT AND STYLE

1. Language and Spelling

Either British or American spelling of English is acceptable but the form chosen should be consistent throughout the thesis/dissertation/report. If a Supervisory Committee permits a thesis/dissertation/report to be written in a language other than English, two abstracts must be presented, one in English, followed on a new page by another in the language of the thesis.

2. Typing and Printing

The text should be double-spaced including the Abstract, Acknowledgement (except for quotations of more than one sentence, footnotes, tables and bibliography, all of which may be single-spaced). Theses/dissertations/reports are to be typed or reproduced on one side of the paper only. We don’t recommend double-sided for binding reasons. Most type styles, except for various styles of script-like type, are acceptable. The entire text of the thesis/dissertation/report must use the same font, with care taken to ensure evenness of impression. If certain characters are not available on the typewriter or computer being used, mathematical equations, complex tabular material, exponents and subscripts may, at the discretion of the GAU, be inserted neatly by hand with black India ink. Letraset press-type symbols must not be used in the text. No extensive erasures or use of correcting fluid are permitted.

NOTE: The print and duplication of the thesis/dissertation/report must be of the highest quality. Only solid, black print is acceptable. Broken, uneven, blurred, draft quality dot matrix or light print is not acceptable.

Students are encouraged to use a Word software program or use templates which are available on the Electronic Theses & Dissertations website: http://www.unb.ca/gradschl/etd/ to produce your thesis/dissertation/report.

Print must be letter quality or near letter quality and laser printing is highly recommended. Pages which have been photocopied from other sources and placed in the thesis/dissertation/report must also be of the highest quality. If a high quality original is not available, the page should be retyped or redrawn to conform with standards or the page should not be included in the thesis/dissertation/report.

3. Paper

A good quality acid-free paper must be used for a master copy. Other copies may be photocopied, offset, or computer-produced on any standard quality paper normally used in these machines. The same quality of paper must be maintained throughout each individual copy of the thesis. All theses should use standard 8½ x 11 inch (216mm x 279mm) paper size.

NOTE: Paper with punched holes is not acceptable.
4. Margins

There should be a margin of not less than 4 cm (1½ inches) on the left side of each sheet and of not less than 2.5 cm (1 inch) on the top, bottom and right-side margins. This refers to the illustrations as well as to the text, and to all other material bound with the thesis/dissertation/report.

Note: If your margins do not conform to be above-noted, the thesis/dissertation/report will not be accepted at the School of Graduate Studies.

5. Illustrations

The presentation of illustrative material should be consistent throughout the thesis/dissertation/report, except for the case where articles are included in Ph.D. dissertations in which case the format of the original publication is acceptable. Small illustrations may be placed directly into the text of the thesis/dissertation/report, while larger ones should be of standard size with allowance for the prescribed margins. Larger illustrations should be avoided if possible, but if required, they must be submitted flat for inclusions into the text as foldouts or as unbound insertions into a pouch inside the back cover of the thesis/dissertation/report.

(a) Tables and Figures

Remember that every page in the thesis/dissertation/report must bear a consecutive number. [This includes pages bearing tables and figures.] Each table or figure should be numbered and identified with the word "Table" or "Figure." In addition, separate lists of all tables and figures, identifying each by name, number, and page should be included in the introductory material at the beginning of all theses/dissertations/reports.

Tables or figures may be placed individually throughout the body of the text; or they may be grouped together at the end of each chapter, or at the end of the thesis/dissertation/report but before the bibliography or list of references, etc. When the thesis/dissertation/report includes separate articles, grouping illustrative material at the end of the thesis/dissertation/report is not an option. Both tables and figures in this type of format are to be included within the relevant article (individually throughout the text or as a group at the end of the article) and numbered consecutively using the chapter/article number (i.e. when possible they should be renumbered to fit the thesis/dissertation/report).

As far as possible, all titles of tables and figures should be on the same page as the table or figure. In those cases where this is not possible, the title and explanation (or legend) of the table or figure may be placed on the reverse side of the immediately preceding blank page so that it faces the table or figure. However, the number of such a page must appear on the blank side in conformity with the placement of page numbers in the rest of the thesis/dissertation/report. These pages must be numbered consecutively with the rest of the thesis/dissertation/report.
Note: The electronic version must have the title and explanation (or legend) on a separate page after the corresponding figure without a page number. Make sure that it does not affect the page count.

(b) **Photographs**

There are a number of options available for reproducing photographs and you may choose the one you prefer. Remember, all photographs and reproductions of photographs must be of excellent quality with a sharp colour contrast otherwise they will not be accepted by the Graduate School. Please contact UNB Imaging Services for information regarding this process at 453-4843 or imaging@unb.ca.

Dry-mounting tissue is the preferred method of affixing photographs although some glues are acceptable as long as the photos adhere well to the page. Photographs reproduced directly on 216mm x 279mm photographic paper are also acceptable. [Do not use tape of any kind.] For advice and assistance in using any of these processes, contact UNB Imaging Services. You are advised, particularly if numerous photographs are to be presented, to mount several per page and have them reproduced to thesis/dissertation/report page size with prescribed margins, by offset printing. Imaging Services should be consulted for technical advice concerning the latter.

c) **Maps**

If you have to use maps in your thesis you should ensure that excellent print quality is obtained. When copying maps from other sources, the print quality of the original must be clear and sharp. Maps taken from published sources will usually require copyright permission. You should follow copyright regulations discussed below. Oversize maps, which will be inserted in a pocket on the inside back cover of the thesis/dissertation/report, must be of excellent quality and labelled in accordance with the list of maps which will appear in the prefatory pages. Keep this in mind if you intend to reproduce maps as they must be redrawn if acceptable quality is not obtained.

Remember, 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 colors.] Similarly, shaded areas such as countries on a map, have greater contrast in microfilm or photocopy if cross hatching is used instead of colour.

d) **Line Diagrams and Equations**

Line diagrams and equations printed by stencil can be conveniently reproduced by photocopying or by offset printing. Direct reproduction of recorder output (e.g. chart records, NMR Spectra, etc.) is permissible, but the illustrations must be clear and legible. **The originals of such recorder output must be submitted with the master copy of your thesis/dissertation/report for purposes of microfilming. They will be returned following microfilming.**
6. Page Numbering

Typed consecutive numbers must be used for each page. Small Roman numerals are used for the "preliminary pages" (those preceding the Text) with the numbers appearing at the center of the bottom of each page. The title page is considered to be page 'i' but is unnumbered. Your Introduction should start as page 1 (Arabic numerals). Arabic numerals must be used for all the remainder of the thesis/dissertation/report pages except the vitae (including text, tables, page-size figures and illustrations, bibliography, and appendices). The location of page numbers must be consistent throughout the thesis/dissertation/report, including Figures, Illustrations, etc. (i.e. the top right hand corner). Note: If you have pictures, graphs, figures, tables, etc. that are printed landscape on the page, your page number cannot be landscape. Your page numbers must be placed on every page portrait & consistent throughout.

7. Footnotes

For the main body of a thesis/dissertation/report, footnotes may be placed at the foot of the page, in a group at the end of the chapter, or grouped at the end of the thesis/dissertation/report before the bibliography or list of references. When footnotes are collected after chapters or at the end of the thesis/dissertation/report, their location must be shown in the table of contents by title and page.

8. Bibliographic Form

The bibliography, or literature cited, lists sources of information used in the preparation of the thesis/dissertation/report. The format will be defined by the conventions of the particular research field and described in the recommended style manual. The bibliography or list of references normally appears at the end of the thesis/dissertation/report, preceding the appendices and vita. When individual articles are incorporated in the thesis/dissertation/report each will have its own list of references.

Some departments and GAUs have particular stylistic requirements. You are advised, therefore, to check with your supervisor prior to presentation of the final manuscript. A list of the style manuals required for some departments is given in Appendix I. Many of these and other recommended guides are available in the appropriate libraries on campus as well as in the Bookstore.

9. Appendices

All appendix pages must be numbered consecutively with the rest of the thesis/dissertation/report and must be of high quality print to conform with the rest of the thesis/dissertation/report. The body of the text should contain no more data than are essential. Long mathematical developments or proofs, computer programs and extensive bodies of detailed experimental data should be included in appendices and show the numbers from left to right. In certain cases, to facilitate reference between text and appendix, the appendices may be bound as a separate volume.
V. PLAGIARISM AND COPYRIGHT

PLEASE READ THE FOLLOWING INFORMATION CAREFULLY IF YOU ARE INCLUDING MATERIAL WHICH IS PREVIOUSLY COPYRIGHTED. THESESES/DISSERTATIONS/REPORTS CANNOT BE ACCEPTED IF THE INSTRUCTIONS BELOW ARE NOT FOLLOWED

1. Plagiarism

Plagiarism is a serious offence and past cases have resulted in dismissal from the graduate program, revocation of a degree already granted, and outright rejection of the thesis/dissertation/report. You are well-advised, therefore, to become familiar with the UNB Senate Regulations on the matter. Plagiarism consists of:

- Quoting verbatim or almost verbatim from a source (such as copyright material, notes, letters, business entries, etc.) without acknowledging this to be a quotation; taking over someone else's line of thought, argument, arrangement, and supporting evidence (such as, for example, statistics, bibliographies, etc.) without indicating such dependence; submitting someone else's work, in whatever form, (workbook, artwork, tables, etc.) without acknowledgement; representing as one's own in any academic work submitted for credit in a course or program of study, any idea or expression of an idea of another.

2. Copyright

If you intend to use previously copyrighted material in your thesis/dissertation/report, you must include, with your thesis/dissertation/report, letters of permission from the person(s) or publishing company holding the copyright. This usually involves a considerable amount of time and should be done well in advance of the submission of the thesis/dissertation/report as these letters must accompany the thesis/dissertation/report when the final copies are presented to the Graduate School.

When letters of copyright permission cannot be obtained and, when the omission of this material will not deter from the sense of the text, the copyright material should be removed and a page inserted in its place [only for the microfilming copy of the thesis/dissertation/report.] This page should explain that the material involved has been removed because of the unavailability of copyright permission; what information the material contained; and the original source of the material.

If any chapter has already been submitted for publication, accepted for publication, or published, a footnote to that effect should appear on the first page of the chapter. If the material is co-authored, permission for the use of this material is required as stated above.
VI. IMAGING SERVICES INFORMATION

The Imaging Services Department have facilities for duplicating theses and other materials. We strongly suggest that you use Imaging Services to make sure that your copies are produced to the best quality and under conditions that will guarantee adequate permanency of such copies in proper storage facilities. For production costs and printing deadlines, call 453-4843 (Marshall D’Avray) or 458-7907 (Carleton Hall). Before you can get copies done, you must submit to Imaging Services the “Approval of Duplicated Copies of Dissertation/Thesis/Report form (gold form). Also, if you take a disk or memory stick to Imaging for them to print out your dissertation/thesis/report, your Word document must be converted to a PDF version. This protects your document from being changed if it is opened by another computer.

APPENDIX I

SELECTION OF GUIDES FOR WRITING GRADUATE THESES, DISSERTATIONS AND REPORTS

In addition to the manuals below, many research and scholarly associations and journals have style guides or sections on information for authors which contain valuable advice on presentation and format. Candidates should consult their supervisors and Directors of Graduate Studies regarding these.


**Science**


APPENDIX II

(CORRECT FORM FOR CV)

(As approved by the Executive Committee of the School of Graduate Studies on November 9, 1999). **Please do not put a page number on the CV.**

CURRICULUM VITAE or CV

Candidate's full name:

Universities attended (with dates and degrees obtained):

Publications:

Conference Presentations:
APPENDIX III
(SAMPLE TITLE PAGE)

TITLE OF THESIS, DISSERTATION or REPORT
by
Name of Candidate

Previous Degrees (i.e. Degree, University, Year)

A Thesis, Dissertation or Report Submitted in Partial Fulfilment of the Requirements for the Degree of

Name of Degree

in the Graduate Academic Unit of (Department/Faculty name)

Supervisor(s): (name, degree department/field)

Examining Board: (name, degree, department/field), Chair (Masters)
(name, degree, department/field)
... (continue as required)

External Examiner: (name, degree, department/field, institution)
(This is noted for the External to the University for a PhD only)

This thesis, dissertation or report is accepted by the Dean of Graduate Studies

THE UNIVERSITY OF NEW BRUNSWICK

Month, Year (of submission to Graduate School)

© Name of Candidate, Year (of graduation)
This is to authorize the Dean of Graduate Studies to deposit two copies of my dissertation/thesis/report in the University Library on the following conditions:

(DELETE one of the following conditions)

(a) The author agrees that the deposited copies of this dissertation/thesis/report may be made available to users at the discretion of the University of New Brunswick

OR

(b) The author agrees that the deposited copies of this dissertation/thesis/report may be made available to users only with her/his written permission for the period ending ________________________________

JUSTIFICATION: ______________________________________________________

After that date, it is agreed that the dissertation/thesis/report may be made available to users at the discretion of the University of New Brunswick.*

__________________________________  ____________________________________
Date                                Signature of Author

__________________________________  ____________________________________
Signature of Supervisor             Signature of Supervisor

__________________________________  ____________________________________
Signature of the Dean of Graduate Studies Date

*Authors should consult the "Regulations and Guides for the Preparation and Submission of Graduate Dissertations/Theses and Reports" for information concerning the permissible period of restricted access and for the procedures to be followed in applying for this restriction. The maximum period of restricted access to a dissertation is four years.

BORROWERS must give proper credit for any use made of this dissertation/thesis/report and obtain the consent of the author if they propose to quote or to reproduce the dissertation in whole or in part.

Revised 2004
APPENDIX V

Library and Archives Canada
Theses Non-Exclusive License

Form is available from the Graduate Secretary in your Dept/Faculty or at the School of Graduate Studies.

You can also download the PDF version from the Library & Archives Canada website:
http://www.collectionscanada.gc.ca/thesescanada/s4-270-e.html
**APPENDIX VI**  
(SAMPLE)

**TABLE OF CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>ii</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGMENT</td>
<td>iv</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>x</td>
</tr>
<tr>
<td>1.0 INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Background</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Objectives</td>
<td>4</td>
</tr>
<tr>
<td>2.0 LITERATURE REVIEW</td>
<td>7</td>
</tr>
<tr>
<td>2.1 Introduction</td>
<td>7</td>
</tr>
<tr>
<td>2.2 Marston and Spangler’s Theory (ACPA, 1981)</td>
<td>7</td>
</tr>
<tr>
<td>2.3 Twin Culvert Induced Trench Installations</td>
<td>10</td>
</tr>
<tr>
<td>3.0 MATERIAL PROPERTIES</td>
<td>15</td>
</tr>
<tr>
<td>3.1 Introduction</td>
<td>15</td>
</tr>
<tr>
<td>3.2 Stress-Strain Behaviour</td>
<td>16</td>
</tr>
<tr>
<td>3.3 Density</td>
<td>18</td>
</tr>
<tr>
<td>4.0 MODELING OF CENTRIFUGE</td>
<td>25</td>
</tr>
<tr>
<td>4.1 Introduction</td>
<td>25</td>
</tr>
<tr>
<td>4.2 Experimental Set-up</td>
<td>27</td>
</tr>
<tr>
<td>5.0 CONCLUSION</td>
<td>32</td>
</tr>
<tr>
<td>6.0 REFERENCES</td>
<td>40</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>45</td>
</tr>
<tr>
<td>CURRICULUM VITAE or CV</td>
<td></td>
</tr>
</tbody>
</table>
CHECKLIST FOR STUDENTS SUBMITTING FINAL COPIES:

Prior to the submission of final copies of your thesis, dissertation or report, it is very important that the formatting conforms according to the Regulations & Guidelines for the Preparation & Submission of Theses, Dissertations and Reports or the School of Graduate Studies will not accept your final copies.

MARGINS

☐ The left hand side margin is not less than 4cm or 1.5 inches on each sheet.
☐ The top, bottom and right-side (including all illustrations and all other materials bound with the thesis) on each sheet are not less than 2.5 cm or 1 inch on all other sides.

TEXT

☐ The entire text of the thesis, dissertation or report must have the same font and the text double-spaced including your Abstract, Acknowledgement, Dedication pages (except for quotations of more than one sentences, footnotes, tables and bibliography). Note: The print & duplication must be of highest quality. Only solid black print is acceptable. Broken, uneven, blurred or draft quality dot matrix or light print is not acceptable.

TITLE PAGE

☐ Your title page is formatted according to the “Sample Title Page” according to the Regulations & Guidelines for the Preparation & Submission of Theses, Dissertations and Reports.

TABLE OF CONTENTS

☐ Your Table of Contents is formatted according to the “Sample Page” found in the Regulations & Guidelines. Make sure you also include your Abstract, Dedication, Acknowledgements, List of Tables, etc. with Roman Numeral numbers, prior to the Introduction (page 1) in your Table of Contents.

VITA

☐ Your VITA is included at the end of your thesis, dissertation or report with no page number. Your Vita should also be added at the end of your Table of Contents with no page number. Please refer to the “Sample Page” in the Regulations & Guidelines.

APPLY TO GRADUATE

☐ Application to Graduate – You are required to complete the on-line application to Graduate on the Graduation Website. There are deadlines to apply, please visit the website: http://www.unb.ca/graduation/
WHEN SUBMITTING YOUR FINAL COPIES TO THE SCHOOL OF GRADUATE STUDIES & YOUR PERSONAL COPIES TO THE CIRCULATION DESK AT THE HARRIET IRVING LIBRARY, PLEASE PUT THEM IN BLUE BOXES, LABELS ON EACH BOX WITH YOUR NAME & DEGREE. Blue boxes (empty & recycled) are usually available at the School of Graduate Studies office.

☐ 2 Copies (original + copy) to fulfill degree requirements are required. (Graduate Studies & the Library covers the binding costs). “White Binding Form” should be included, please complete & attach with the library copies. If you submit a copy electronically to the Electronic Theses & Dissertations website, the Graduate School only requires 1 original paper copy.

☐ Personal copies you wish bound. Students are responsible to submit those copies directly to the Harriet Irving Library and pay for the binding. Binding fees are listed on the “Pink Binding Form” Please complete the pink form & submit your printed copies in blue boxes, directly to the Circulation desk at the HIL. SGS or Supervisor’s signature is required on the pink binding form to attest that the personal copies are formatted according to the SGS Regulations & Guidelines.

THE FOLLOWING FORMS SHOULD BE INCLUDED WITH YOUR FINAL COPIES SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES:

☐ 2 Harriet Irving Library Deposit Forms – both forms to be completed by the student dated & signed with the supervisor’s signature.

☐ (White) UNB Thesis, Dissertation or Report Binding Form – Should be completed & submitted with the 2 copies for the library.

☐ Non-Exclusive License to Reproduce Theses/Dissertations – Form completed by students submitting a thesis/dissertation. Students submitting a report are not required to complete this form.

☐ Approval of Duplicated Copies of Dissertation/Thesis/Report – This form is used when you request Imaging Services to make the copies for you. Imaging will sign the form to certify that they have produced quality copies adequate for binding.

☐ Report on Master’s Thesis/Report (blue form) – Completed by Dept/Faculty with the signatures of Director of Graduate Studies, Supervisor, Members of the Examining Board Committee.

☐ Completion of GAU Requirements for Masters Degree or Diploma (yellow form) – Completed by the Dept/Faculty with the signature of the Director of Graduate Studies. This form can be submitted separately by the Graduate Secretary.

☐ Ph.D. only – Completion of GAU requirements for Ph.D. Degree (Green form) – Completed by the Dept/Faculty & signed by the Director of Graduate Studies.

Note:
- Master’s student ready to submit final copies, should verify with the Graduate Secretary in the Dept/Faculty in regards the above-noted completion forms.
- Ph.D. students will be given a set of completion forms by the Dean of Graduate Studies after the oral defence.

_______________________________  ___________________________
Student’s signature                          Date

(Checklist revised Jan 2012)