INTRODUCTION

Congratulations on your progress! The submission of your master's thesis or doctoral dissertation is the last step in the program leading to the awarding of your degree. The final copy becomes a permanent and official record available for public use. Because your dissertation or thesis is an official addition to the body of scholarship and research undertaken at the College of Science, University of the Philippines, the Graduate Office provides this manual as a guide for its preparation and submission.

Your thesis or dissertation committee is responsible for reviewing both the style and the content of your manuscript. The guidelines explained here focus primarily on physical format. If you follow these guidelines, the format of your thesis or dissertation will meet the minimal requirements. Be aware, however, that your committee can both waive these or set higher standards. Because it is your responsibility to ensure that your thesis or dissertation is a professional document, you are advised to become thoroughly familiar with these instructions before you begin writing. Consult with your committee members, especially your chair, regarding current standards and models unique to your field of study.
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**Sample Title Page for Thesis Classification of P**  
**Sample Title Page for Thesis Classification of C**  
**Sample Title Page for Thesis Classification of F**  
**Honor Code Page**  
**Sample Endorsement Page to be signed by the Adviser, Co-Adviser if any, Reader, Director, and Dean**  
**Appendix 6 (Sample Front Bound Cover)**  
**Appendix 7 (Sample Side Bound Cover)**  
**Requirements**
1. INTRODUCTION

1.1. Responsibility

The student is solely responsible for the preparation of the thesis or dissertation according to the format and timetable prescribed by the Thesis Examination Committee, and within the timetable specified in the Graduate Guidelines. It is the responsibility of the student's Thesis Examination Committee to judge the acceptability of the thesis/dissertation from all standpoints, including writing quality, neatness, mechanical considerations, and technical and professional competency.

Committee members attest to acceptability when they sign the signature page. Therefore, it is important that they be provided with a copy of the thesis or dissertation before the student's defense.

Each department/institute is responsible for specifying an acceptable style or styles for theses, dissertations, and major papers prepared by its graduate students. Generally, the style should conform to the major professional or scientific journals in the student's area of study. If there is available a suitable style manual, such as the Style Manual for Biological Journals or the APA Publication Manual, the department/institute may wish to specify such as an acceptable style. If a style manual is not available, the department/institute may wish to develop its own or suggest the major journals whose style is acceptable. Students should check with their thesis adviser regarding an acceptable style and should become thoroughly familiar with it before they begin preparing their thesis. This manual also outlines a style that is acceptable in many fields.

The student and his/her thesis or dissertation committee are jointly responsible for seeing that the manuscript follows a correct form of scholarly style and usage. In fulfillment of this responsibility, each member of a candidate's Thesis Examination Committee must have made his or her criticisms and have seen and approved the changes the student has made in response to those criticisms before final typing of the thesis or dissertation. After a successful defense of the thesis or dissertation and all revisions have been made, the members of the Thesis Examination Committee indicate their approval of the final copy by affixing their signatures on the signature page. Finally, after the thesis or dissertation is suitable for deposit in the various libraries, it is accepted by the College through the Graduate Office.

1.2. Language

The thesis or dissertation must be written in English or Filipino. All College of Science requirements must be met. The thesis or dissertation must be read and approved by the Thesis Examination Committee.

2. ORGANIZATION OF CONTENTS

The following preliminary pages precede the body of the thesis or dissertation, should appear in this order, and with the exception of the title page are numbered in lowercase Roman numerals.

- title page (no page number)
- honor code page
- signature page
- copyright page (optional)
- dedication page (optional)
- acknowledgments (optional)
• brief Curriculum Vitae (optional)
• abstract
• table of contents
• list of tables
• list of figures / illustrations / graphs / charts / maps / plates
• list of abbreviations and symbols (optional)
• preface (optional)

The text and other pages following the preliminary pages are numbered with Arabic numerals and must be arranged in the following order:

• text (chapters of the manuscript, including tables and figures) ; see below
• bibliography/references
• appendices, if any
• notes, if any
• glossary (optional)
• index (optional)

There are two options in presenting the text of the thesis /dissertation: as stand-alone chapters or as a whole. Stand-alone chapters are complete manuscripts ready for submission to a scientific journal or already published scientific articles. The format of stand-alone chapters are based on the intended journal requirements for your specialization. The required sections for the text/body of these formats are as follows:

• Introduction
• Review of Literature
• Stand-alone Chapters
• Summary and Conclusions
• References (complete citations)

For those who opt to write it in the usual manner, the required sections for the text/body are as follows:

• Introduction
• Review of Literature
• Methodology
• Results
• Discussion or Results and Discussions
• Conclusions
• References (complete citation)
2.1. Title Page

Sample A provided at the back of this booklet, illustrates the acceptable thesis/dissertation title page format.

Indicate your degree and field (e.g., Master of Science in Biology), and give the month and year of graduation (April, June or October). Do not use the date you completed or turned in the thesis/dissertation.

2.2. Honor Code page

The student needs to sign a declaration that the research was conducted according to established scientific practices and standards of academic integrity of the University.

2.3. Signature Page

Obtain original signatures of your Adviser/s, Reader/s, Director / Chair / Coordinator of the institute/department/program and the Dean. Signatures must be in permanent BLACK INK. Refer to Samples C and D for the signature page format. Please note that no title or heading appears on the signature page. In addition, the page number (ii) should be positioned consistently with the page numbers in the rest of the manuscript (either in the top right corner or centered one inch from the bottom of the page).

You must submit the original signature page with the six copies of the thesis or dissertation.

2.4. Acknowledgements

Use your discretion in making acknowledgments. It is customary to acknowledge special assistance from extramural agencies. There is no obligation that assistance received from members of the dissertation or thesis committee be acknowledged. Acknowledgments should be couched in terms consistent with the scholarly nature of the work. Your name and the date should not appear on this page.

2.5. Abstract

The abstract is a succinct account of the thesis containing a statement of the problem, procedures or methods used, results, and conclusions. For page numbering, continue to use lowercase Roman numerals, numbering consecutively from the preceding page. If the student desires, the dissertation abstract may be submitted to University Microfilms International (UMI) for publication in Dissertations Abstracts International.

The abstract included with the thesis or dissertation must be double-spaced and the title should simply be ABSTRACT.
2.6. Table of Contents

The table of contents is to include the following pages: acknowledgments, abstract, list of tables, list of figures, list of abbreviations and/or symbols, appendices and bibliography as well as the major sections of the text. Please note the following:

- You must have dot leaders between the end of a heading and its page number.
- Wording of headings on the table of contents must reflect wording of headings within the text precisely.
- Each new sub-level heading must be indented to distinguish it from the previous sub-level (See Section 3.2.)
- The title page, signature page, dedication page, and table of contents are not listed in the table of contents. However, with the exception of the title page these pages must be numbered consecutively with lower case Roman numerals.

2.7. List of Tables

The term "table" applies to numerical and statistical data set in vertical or horizontal alignment. If there are tables in your text or appendix, a list of tables must be included. The list of tables is on a page by itself and arranged in the same general format as the table of contents. Type the table numbers in Arabic numerals, and the titles in uppercase and lowercase letters, with dot leaders extending from the last letter of the title to the page number. Please note:

- Titles may be shorter than they appear in the text as long as they are not misleading. Titles may not be longer than the titles in the text.
- Numbering of tables. You have two options:
  (1) you may begin by numbering the first table with "1" and continue to number your tables consecutively throughout the entire manuscript; or
  (2) using a decimal numbering system you may number your tables consecutively within each chapter. Thus, if chapter four has three tables and chapter five has three tables, the numbering would be as follows: 4.1, 4.2, 4.3, 5.1, 5.2, 5.3. The same numbering system applies to figures.
• Single space within titles which are longer than one line, but double space between each entry.

2.8. List of Figures

The term figure includes graphs, maps, photographs and all other types of illustrations. In taxonomic papers in biology or paleontology, a separate List of Plates is usually required. This list is also placed on a page by itself and arranged in the same general format as the list of tables. Designate figure numbers with Arabic numerals, and plate numbers, if any, with capital Roman numerals. If the thesis/dissertation contains both figures and plates, arrange them on separate lists.

<table>
<thead>
<tr>
<th>LIST OF FIGURES</th>
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<tbody>
<tr>
<td>Figure</td>
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<td>--------</td>
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<td>1. Map of O'ahu</td>
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<td>2. Bernoulli Curve, Region A</td>
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<td>3. Bernoulli Curve, Region B</td>
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<tr>
<td>5. Distribution of Survey Data</td>
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</tbody>
</table>

2.9. List of Abbreviations and/or Symbols

If abbreviations and/or symbols are needed in the text, a list should be provided to explain their definitions or meanings. The list is to be placed on a separate page and included after the List of Figures or List of Plates.

2.10. Text

The organization of the text varies with the discipline and the subject matter. If the thesis/dissertation is divided into chapters, each chapter must be titled and must begin on a new page. Chapter headings must be centered, and a consistent font size and style should be used throughout the paper.

2.11. Appendices

Materials not vital to the text, but which supplement the text, are placed in an appendix or appendices. Appendices may include schedules, lists, questionnaires, tests and forms used to collect data, as well as case studies and series of plates, graphs or charts which would take up too much space or which would be distracting if placed in the text. Do not use cover pages; simply type the title of the appendix at the top or bottom of the first page of the appendix in the same way as figure/table captions.

Each type of material (e.g., tables, questionnaires) forms a separate appendix, which must be labeled separately (Appendix A, Appendix B, etc.); each appendix must be titled (title should give indication of the content/material that is included in the appendix). If only one appendix is used, it should be designated simply "Appendix," not "Appendix A."

The appendices must meet the specifications for other pages in the text with respect to margins, appropriate pagination, quality of reproduction and paper, etc.

2.12. Bibliography/References

Use a bibliographic style that is professionally accepted in your field. The bibliography appears immediately after the last page of the text unless an appendix intervenes, in which case it follows
the appendix. The references must be the last element of the thesis or dissertation unless there is an index.

The bibliography must include every reference mentioned in the body, figures, tables or plate captions or cited in the footnotes of the text. Under no circumstances should materials that have not been used in the preparation of the thesis/dissertation be cited. In every case, consult with your committee regarding the form and arrangement of the bibliography.

3. TEXT FORMAT

3.1. Style

With the exception of the guidelines in this booklet, all aspects of style, usage, and format are left to the discretion of the institute/department and thesis committee. Students and their advisers are urged to refer to one of the leading style guides, such as those indicated below, or to the style of a leading journal or publication in the discipline, for those aspects left to their discretion.

Some suggested style manuals:


Council of Biology Editors. CBE Style Manual.


Turabian, Kate L. Manual for the Writers of Term Papers, Theses and Dissertations.


Strunk, W., Jr. and E. B. White. The Elements of Style. (For grammar and punctuation only.)

3.2. Headings in the Text

It is important that headings and subheadings be consistent throughout the document. Not only does this give the document a professional appearance, it provides clarity and guidance to the reader. Please heed the following guidelines:

Major Headings. These include acknowledgments, abstract, table of contents, lists of tables, figures and plates, chapter headings, appendices and bibliography. Begin each major heading on a new page, followed immediately by the text. All of these headings must be done in the same size and style (e.g., all capital letters, all bold letters). The chapter heading appears only on the first page of the chapter (Figure 1). Subheadings. Each different level must be distinguished by a different style. For example, the first sub-level might be centered and underlined, and the second sub-level might be flush left with no underline. Be sure that these styles are used consistently! Although each different level must be distinguished, the same level must have a consistent style throughout the work (Figure 1).

Subheadings should NOT begin on a new page (unless, of course, the previous section ended at the bottom of a page).
Each different sub-level must be listed appropriately in the table of contents. Each new sub-level is indented a little farther right than the previous level in the table of contents. The title of the thesis or dissertation should appear only on the title page. Please note that in the following examples (Figure 1), the dotted lines represent text.

3.3. Margins

Standardized margins are required on every page to ensure that no part of the thesis or dissertation is cut off when it is bound and trimmed. The margins of the thesis page are:

- Top = 1"
- Bottom = 1"
- Right = 1"
- Inside of the Binding Edge = No less than 1 ½"

The only exception is facing pages, which should have the 1½ inch margin on the right side.

Page numbers must fall within the margins. Full justification will be accepted only if there are no large white spaces between words. Spaces between words must be approximately even in size.

![Figure 1. Examples of Subheadings and Margins](image)

3.4. Use of Language other than English

Choose a style and be consistent. The Chicago Manual of Style suggests that isolated words or phrases in a foreign language be set in italics, but underlining can also be used. A quotation entirely in a foreign language should only be enclosed in quotation marks, not italicized or underlined. Also, foreign words commonly used in English (i.e., they can be found in a good English dictionary) should not be distinguished.
3.5. Line Spacing/Widows and Orphans

Double spacing is required except where style calls for single spacing (e.g., footnotes, indented quotations, tables).

Widows (e.g., the last line of a paragraph as the first line of a page) and orphans (e.g., a heading or first line of a paragraph as the last line on a page) are not acceptable.

3.6. Punctuation

Many common manuscript problems involve punctuation, especially the use of commas. For example, when used with quotation marks, commas and periods are placed within the quotation marks while colons and semicolons are placed outside of the quotation marks. Also remember to use commas after the terms "e.g." and "i.e.".

3.7. Hyphenation

Consult a dictionary for correct hyphenation. As a general rule, no more than three hyphens at the end of a line per page is acceptable. It is also not acceptable to have more than two consecutive hyphens at the ends of lines. Be sure to check the number of hyphenated words per page if you are using the automatic hyphenation function on your computer.

3.8. Pagination

Every page in your manuscript must be counted in the numbering. A page number must appear on every page with the exception of the title page and cover pages for "Part I, II," etc.

Placement, size, and style of page numbers must be consistent throughout and should not exceed the margins. Page numbers should appear either in the top right corner (one inch from the right edge of the paper and one inch from the top) or centered one inch from the bottom of the page. This includes the signature page as well as pages with tables, figures, appendices, etc.

Page numbers with letter suffixes, such as 10a, 10b, etc, are not acceptable. Do not write the word "page" before the number. No dashes, periods, underlining, or any other marks may appear before, after, or under the page numbers. Zeroes with a slash through them are not acceptable.

3.8.1. Preliminary Pages

Preliminary pages (see Section 2 for a detailed list) are numbered in lowercase Roman numerals (ii, iii, iv, etc.), beginning with the signature page, which should be numbered "ii," and so on to the end of the preliminaries (Note: The title page counts as page "i" but the number is not placed on the page).

Placement of preliminary page numbers should be consistent with the placement of page numbers throughout the text.

3.8.2. Body of Thesis/Dissertation

These pages are numbered in Arabic numerals (1, 2, 3, etc.), beginning with the first page of Chapter 1 and continuing consecutively to the last page of the bibliography.
3.8.3. Chapters

Each chapter must begin on a new page. Chapters should be numbered with either Arabic or Roman numerals. Acceptable methods of indicating chapters are as follows:

CHAPTER 1
INTRODUCTION

3.8.4. Facing Caption Pages

Facing caption pages and their corresponding illustrations must have their own page numbers. If you place your numbers at the top right corners the number on the facing page should appear at the top left corner because the page will be turned to face the accompanying illustration. Both figure and facing pages need page numbers. For example, if the facing page is page 4, then the page with the figure will be page 5. The caption should face the same direction as the figure; i.e., if your figure is placed broadside (landscape), the caption should be placed broadside (landscape) as well.

3.9. Use of Shading

Shading may be used as a key to identifying areas of figures. However, shading is not allowed over any type of text if it reduces readability.

3.10. Running Headers

Do not use a running header.

The title of the thesis or dissertation appears only on the title page. Likewise, chapter titles appear only on the first page of the chapter.

4. ILLUSTRATIONS

4.1. Tables

The term "table" applies to numerical and statistical data set in vertical or horizontal alignment. Titles should be self-explanatory, concise and consistent in form and font style throughout the thesis or dissertation.

4.1.1. Format of Tables

Type the table number and caption above or below the data. The placement must be consistent throughout the thesis. Titles should begin with the word "Table," followed by a number and a period. The title, table number, and caption may be centered or flush left but must be handled consistently throughout the manuscript. The title, table number, and caption may be written in all uppercase or in uppercase and lowercase letters, but must be typed in a consistent manner for subsequent tables.
4.1.2. Placement

Tables over half a page in length should be placed on a separate page. Wide tables may be placed broadside on the page with the table number and the caption at the right side of the page (i.e., with the left-hand margin as the "top" of the page). The first typewritten line should begin no higher than 1½ inch from the binding side of the page and the last line should end no lower than 1 inch from the bottom.

Tables too wide to be accommodated on one page may be typed on two or more pages, pasted together, and either folded or reduced to page size by a suitable photographic process. Long tables may be continued from page to page, in which case the table number and caption on succeeding pages should appear as follows:

Table 3. (Continued) Abundance of Selected Diatom Species in Subic Bay

Place tables within the text if possible. If the thesis or dissertation contains so many tables that placement within the text would be unwieldy, you may include your tables in an appendix.

4.1.3. Footnotes

Footnotes for tables are to be indicated by standard symbols (–, *, etc.) or lowercase letters (a, b, etc.). Do not use numbers for footnotes to tables. Footnotes are placed at the bottom of the table (not at the bottom of the page).

4.2. Figures

The term "figure" refers to illustrations such as graphs, charts, diagrams, photographs, and maps, but not statistical data presented in tables. As with tables, figure titles should be self-explanatory, concise and consistent. Figure captions should be placed at the bottom of the figure, even if the figure is placed broadside on the page.

For placement of figures within the thesis or dissertation, see section 4.1.2. Please note that if you choose to group your figures together in an appendix or at the end of your text, they should follow your tables (if any), and the references should be the last element of your thesis or dissertation.

4.2.1. Format of Figures

Number figures consecutively in Arabic numerals throughout the thesis/dissertation, beginning with "1" or consecutively within each chapter.

4.2.2. Photographs

Digital photographs are strongly encouraged. However, if this is not possible, photographs smaller than 8.27 by 11.69 inches should be mounted (see section 4.5); photographs 8.27 by 11.69 inches may be bound, but keep in mind that they will be trimmed in the binding process.

Every page must have a page number, including full-page photographs. If it is not possible to print the page number on the front of the page, it may be placed on the back. Full-page photographs require a facing page for numbering and captions (See Section 3.8.4). Color or black and white photocopy reproductions of photographs are acceptable if high quality photocopying is used.

To ensure presentation of quality, 300 dpi is strongly recommended for reproduction of photographs.
4.2.3. Maps

Each map should have an accurate bar-type scale, some indication of longitude and latitude, a North arrow for orientation and a legend for symbols.

4.3. Placement of Illustrations and Figures on the Page

If it is necessary to turn an illustration or table sideways on the page, the top of the illustration or figure must be on the left (binding) edge of the paper.

4.4. Oversized Materials

When folding oversized pages, special care must be given to assure the edge that is folded over does not touch the 1½ inch left margin, as the edge may be caught in the binding. The entire page should be 8 inches in width rather than 8½ inches to prevent the fold from being cut when the thesis or dissertation is trimmed. The page number should be placed in the same position as on the regular sized pages (See Figure 2).

Vertical Fold: Make the first fold at the right side of the page, folding toward the left. The first fold should reduce the oversized sheet to 8 inches. If further folding is necessary, the left side of the folded page should be folded again, this time back towards the right, leaving a 1½ inch margin from the left and the fold.

Horizontal Fold: If folding from the bottom up, be sure to cut a strip 1 inch wide from the left edge of the entire folded portion. This prevents the fold from being caught in the binding. If a second horizontal fold is needed, the edge should be folded down.

Folding vertically:

Step 1:  

Step 2:
Folding horizontally:

Step 1:

Step 2:

Step 3:
4.5. Mounting

Use dry mount tissue (available from art supply stores), photo mount spray adhesive or double-sided contact paper. Do not use an adhesive with an aqueous solvent such as white glue. This is not recommended because it causes wrinkles in the paper. Do not use rubber cement. Mount illustrations on the same paper used for the rest of the thesis or dissertation. Be sure to leave appropriate margins. Mounting difficulties may be avoided by having photographs printed on the prescribed paper with the margins specified for the pages of the thesis.

4.6. Computer Program Listings

It is often necessary to include computer program listings or other computer output in the appendices of theses or projects. Reduced photocopy reproductions of this material are permissible provided certain standards are met including:

1. required margins are met on photocopies
2. use of acid-free archival bond paper (8.27 x 11.69 or A4 size)

Clear print is a necessity to produce clear photocopies.

4.7. Back Pocket for Oversized Materials

Oversized materials (e.g., maps) may be placed in a "pocket" at the back of the paper. Consult the Graduate Office for more information.

4.8. CD Supplement

Computational work/programs/large outputs of analyses/images may also be presented as a CD supplement.

5. THE FINAL COPY

5.1. Typing/Printing of the Manuscript

The physical appearance of theses and dissertations must be immaculate and convey an impression of pride and quality. Your manuscript must be prepared on computer. Printing of the thesis or dissertation must meet the standards set forth in the paragraphs that follow.

Any standard typeface is acceptable as long as the same typeface is used throughout the manuscript, including figure, table, plate captions with the exception of certain tables, figures and appendix material, which may be set in a different type. Italics should be used only to highlight specific words or phrases in the text or in scientific names.

The type size must be 10 point or larger for all material in the text. This includes any reduced material which may be included. Because the manuscript will be reduced in size on microfilm, the 10 point minimum is necessary to ensure readability.

The print should be letter/laser quality with dark black characters that are consistently clear and dense. Dot matrix is unacceptable.
5.2. Paper

Use only white paper, 8.27 x 11.69 inches or A4 size, acid–free bond paper.

5.3. Reproduction

Reproduced copies are acceptable if high quality photocopying is used.

5.4. Corrections

Correction fluid and correction tape should not be used to cover up errors as they can bleed or flake away from the paper, exposing the uncorrected type. Strikeovers, interlinear insertions, and handwritten corrections are not acceptable.

5.5. Number of Copies to Submit

A total of six unbound copies must be submitted. You may prepare more copies but at added cost of binding.

6. COPYRIGHT AND PUBLICATION

6.1. Copyrights

Scholarly or creative papers, such as dissertations and theses written to satisfy requirements for courses or degrees, are the property of the author. Whether the thesis/dissertation is copyrighted or not, you retain the right to publish all or any part of it by any means at any time.

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Copyright is a form of protection provided by the Law on Copyright and Related Rights (R.A. 8293, Intellectual Property Code of the Philippines) to the authors and creators of original works (i.e., product of one’s independent creation; not copied from the work of another), including literary, artistic and derivative works.

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Copyright privileges now vest immediately upon creating your work, without the requirement of notice or registration formalities. But you should nevertheless include a copyright notice on your dissertation. It signals to readers that you acknowledge your legal rights and that you are the copyright owner. It also tells the year you first published the project. Typical copyright notices include the copyright symbol, the date, and the authors name (e.g., © 1997, John Student).

For more information on copyright and the Philippine Intellectual Property Code, refer to http://www.ipophilippines.gov.ph or consult the U.P. Office of the Vice Chancellor for Research and Development.

6.2. Publishing the Dissertation

6.2.1. Publication Requirements for Doctoral Students

All incoming Ph.D. students of 1st Semester, 2004-05 onwards are required to submit an acceptance letter from the editor/s of or publication of their thesis, in whole or in part, in a refereed reputable scientific journal as defined by the unit.

6.2.2. Acknowledgements

The significant contribution of any person (or group, such as a seminar) to a published work should be recognized within that work by citation of the person's name and a brief identification of the nature of the contribution. This recognition may be in the form of a co-authorship, acknowledgment in the work, or in a prominent footnote. When appropriate and feasible, the nature of the recognition should be agreed upon in writing by the contributor and principal author prior to submission of the work for publication.

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If copyrighted material is used in your work, you must give full credit to the author and publisher of the work used. If a quotation exceeds "fair use," you must obtain written permission from the copyright owner. Among the primary considerations for determining whether or not excerpts from copyrighted materials exceed "fair use" are length and substantiality of the quoted material, nature of the work quoted, value of the quoted work, and effect of its use on the market. Another factor for consideration is the purpose and character of the use of copyrighted material, i.e., whether it is commercial or nonprofit in nature. In general, it is assumed that the quotation of a prose passage of 150 words or less or the quotation of a few lines of verse in a work of scholarship or criticism
does not require permission. However, such things as cartoons, maps, etc. are complete works and permissions are required.

6.2.4. Multiple Authorship

It is the joint responsibility of the graduate student and the faculty member to discuss mutual expectations concerning assignment of authorship of publications resulting from theses, dissertations, or other collaborative research projects.

Ordinarily, the authorship and seniority of authors on a joint publication should be determined by the proportion of scholarly effort put into the research programs. The Graduate Faculty Council would consider it unusual and, indeed, contrary to established graduate policies of the College of Science if a faculty member contributed more than the student to a thesis or dissertation research project.

However, large programs often involve many investigators and more than one doctoral candidate. In such instances, authors may be listed alphabetically or by institutions as may be appropriate and agreeable to those concerned.

Essentially, multiple authorship should be addressed by clearly designating the role that the dissertation author had in the research and production of the published paper. The student must have made a major contribution to the research and writing of papers included in the dissertation.

6.2.5. Inclusion of Published Papers

The inclusion of published papers in a dissertation is the prerogative of the graduate program. The student is advised to get written approval of the inclusion from his or her Thesis Committee chairperson. The College of Science, Graduate Office will house a copy of this approval with the student’s records. The following criteria must then be met:

- There must be an introductory chapter integrating the general theme of the research and stating the relationship between chapters. There may also be a review of the literature that does not appear in the chapters.
- In the case of multiple authors, the role that the dissertation author had in the research and production of the published paper should be clearly indicated in agreement form and attached as appendix. (See Sample G)
- It is expected that the doctoral candidate will be the senior or sole author on all of the papers and will have made a major contribution to the research and writing of all papers included in the dissertation.
- There must be a "comprehensive" abstract at the beginning of the thesis/dissertation. This is required even if an abstract appears with each article.
- There must be adequate referencing of where the individual papers have been published. Written permission for all copyrighted materials must be submitted to the Graduate Office.

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When dissertations are written under research contracts, it is essential to ascertain from the contract-granting agency its expectations with respect to reproduction rights of this particular research. The contract-granting agency must be informed that doctoral students are required to
publish their dissertations. It is then the responsibility of the student to make any necessary arrangements.

7. CHECKLIST FOR CANDIDATE

Before submitting your thesis or dissertation, please check to see that you have done the following:

- Is the information on the title page accurate? Is the title page formatted correctly?
- Does your signature page have original signatures from each member of your committee, in BLACK ink?
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- Is every page legible? Be sure that the quality of print is uniform throughout the thesis or dissertation.
- Do you have the appropriate margins (1½ inches on the left side and 1 inch on the top, bottom, and right sides)? Remember that every page (except facing pages, which have the 1½ inch margin on the right side) in the thesis or dissertation must have these margins.
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If you have followed the guidelines in this booklet and have completed the checklist above, you should be getting ready to celebrate.
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Master of Science in Biology

Marc Timothy C. Tan

Population genetic structure of the Philippine native catfish, Clarias macrocephalus, and its implications for conservation and management

Thesis Adviser:

Jonas P. Quilang, Ph.D.

Institute of Biology

University of the Philippines Diliman

Date of Submission

1 June 2015

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Name and Signature of Student
This is to certify that this undergraduate thesis entitled *Population Genetic Structure of the Philippine Native Catfish, Clarias macrocephalus, and its Implications for Conservation and Management* prepared and submitted by Marc Timothy Calimbahin Tan in partial fulfillment of the requirements for the degree of Bachelor of Science in Biology, is hereby accepted.

JONAS P. QUILANG, Ph.D.
Thesis Adviser

IAN KENDRICH C. FONTANILLA, Ph.D.
Thesis Reader

The Institute of Biology endorses acceptance of this master’s thesis as partial fulfillment of the requirements for the degree of Master of Science in Biology.

SONIA D. JACINTO, Ph.D.
Director
Institute of Biology

The master’s thesis is hereby officially accepted as partial fulfillment of the requirements for the Degree of Master of Science in Biology.

JOSE MARIA P. BALMACEDA, Ph.D.
Dean, College of Science
POPULATION GENETIC STRUCTURE OF THE PHILIPPINE NATIVE CATFISH, CLARIAS MACROCEPHALUS, AND ITS IMPLICATIONS FOR CONSERVATION AND MANAGEMENT

MARC TIMOTHY CALIMBAHIN TAN

INSTITUTE OF BIOLOGY
College of Science
University of the Philippines
Diliman, Quezon City

JUNE 2015
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