

A Guide
for
Writers of Master's Theses
and Doctoral Dissertations

School of Marine Science
Virginia Institute of Marine Science
College of William & Mary

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I. INTRODUCTION

The purpose of this Guide is to provide a set of general procedures to follow in preparing theses or dissertations as part of the requirements for the degrees of Master of Science or Doctor of Philosophy. It is designed to secure the maximum uniformity consistent with the flexibility necessary for the various disciplines in which theses and dissertations are written at the College. It is also designed to assure certain minimum mechanical standards with regard to paper, reproduction methods, and binding.

In using this Guide, common sense and the particular requirements of each discipline should be the major considerations. Students should receive guidance from their advisor and committee members regarding the format of their thesis or dissertation. In most cases Ph.D dissertations are written in the form of publishable journal articles; thus, the format will to some degree depend on the requirements of the particular journal. In addition to the chapters (usually 3 - 5), written as journal articles, an introductory chapter providing background information for the project as a whole and a conclusions chapter, in which the study is described within the broader context of the discipline are included. Students are also often asked to provide their datasets in appendices.

Each thesis or dissertation must include, in the form prescribed and exemplified in the specimen pages provided in this Guide, each of the following items in the order indicated:

- TITLE PAGE
- APPROVAL SHEET
- TABLE OF CONTENTS
- ABSTRACT
- HALF TITLE
- VITA

All theses and dissertations must conform to the mechanical considerations laid down in Part III of this Guide.

All theses and dissertations must be submitted, ready for binding, to the Swem and Hargis libraries as outlined in this guide.

Graduating students are required to submit copies of their theses or dissertations for the College archives as follows: one copy to Swem Library and two copies to Hargis Library. Additional copies will be required for advisors and personal use (see Page 5).

In addition, Ph.D. students must submit two copies of their abstracts to Swem Library—the one that is included in the dissertation manuscript and a second one for submission with ProQuest's Agreement Form. In turn, the Agreement Form and second abstract will be submitted by Swem Library to ProQuest's UMI Dissertation Publishing for production of an archival microform copy and inclusion in the ProQuest dissertations data base.

Each graduating student is encouraged to deposit an electronic (PDF) copy of his or her thesis or dissertation with e School of Marine Science library. Authors will retain all ownership rights to copyright of their work.

Details on copy requirements and associated fees are available from the SMS Registrar.

II. PARTS OF THE THESIS OR DISSERTATION

A. PRELIMINARIES, IN THE FOLLOWING ORDER:

1. **Title Page.** The Title Page must follow exactly the form of the specimen page hereafter provided. The title—using the format for upper and lower case as indicated—should be short, elaborated in a subtitle if necessary. For example, “Tidal Freshwater Marsh - Estuary Interactions,” is preferable to “An Analysis of the Multiple Reasons Tidal Freshwater Marshes are the Single Most Important Part of the Estuarine System.” Short titles for the spine should not exceed 50 characters. No page number appears on the title page.)
2. **Approval Sheet.** The Approval Sheet must follow exactly the form of the specimen page provided in this Guide. Five copies of the thesis or dissertation must contain an Approval Sheet on **acid-free bond** paper. Original signatures of the author and members of his/her Advisory Committee are required for the three library copies. The other copies may have photocopied approval sheets.
3. **Dedication**, if any.
4. **Table of Contents.** See specimen page.
5. **Preface** and/or **Acknowledgments**, if any. See specimen page.
6. **List of Tables**, if any. See specimen page.
7. **List of Illustrations or Figures**, etc., if any. See specimen page.
8. **Abstract.** The Abstract should be a concise summary of the object, scope, and conclusions of the paper, to be contained on one single-spaced page of not over 500 words and, regardless of the discipline, written as far as is possible to be understood by an intelligent layman.

Each page of these preliminaries, beginning with the Title Page, is to be considered in numbering, even though the page number does **not** appear on the Title Page. In these preliminary pages, lower case Roman numerals are used and are always centered 1" from the bottom of the page.

B. TEXT

1. **Half-title.** The Half-title page, which immediately follows the Abstract, consists only of the title centered 4" from the top (see specimen page).
2. **Page Numbering.** Arabic numerals are used in numbering the pages of the text. Although the Half-title is page one of the text, no number appears on this page. The first page of the Introduction or, if none, of Chapter I is numbered page two and the pages following are numbered in sequence through the Reference Material to the end of the thesis or dissertation.

continued

Each page must be numbered consecutively and consistently in either the upper right corner of the page (1 inch from top of page and 1 inch from right margin) or the bottom center of each page (1 inch from bottom of page), being careful not to go beyond the margins. The text starts two spaces below the page number . Pages preceding text such as table of contents, dedication, acknowledgments, etc. must be numbered using Roman Numerals and using the same page numbering format.

Illustrative materials such as tables, charts, graphs, illustrations, etc. should not be given a page number unless they are an integral part of the Text.

The title page, approval page, abstract must not be numbered (also, the copyright and the UMI abstract must not be numbered).

3. **Footnotes.** Adequate citation to sources for particular quotations or other data must be provided. The particular form for footnotes varies from discipline to discipline and should be established by each department concerned. (You may also refer to Bibliography of Standard Guides, Section V, page 10.)

In general, footnotes may be placed at the bottom of each page or at the end of the document. Placement of footnotes must follow page margin requirements.

If departmental standards permit placement of footnotes at the end of each chapter , the footnotes should begin on a new page and be headed: Notes for Chapter I, etc.

If footnotes are placed at the end of the thesis or dissertation, they should follow any appendices and precede the bibliography, should begin on a new page headed "Notes" at the center of the page 2" from the top, and should have in brackets at the center of each subsequent page 3/4" from the top the heading, "Notes to pages ___" with the inclusive page numbers of the text to which that page of notes refers.

C. REFERENCE MATERIAL, IN THE FOLLOWING ORDER:

1. **Appendices**, if any .
2. **Notes to the Text** if placed at the end of the thesis or dissertation.
3. **Literature Cited.** (See specimen sheet)
4. **Vita.** The Vita is a one-page autobiographical sketch of the author containing **full** name, date and place of birth, educational background, degrees and dates, and other pertinent training or experience. (See specimen sheet)

III. PHYSICAL STANDARDS FOR THESES AND DISSERTATIONS

Students must consult with their advisory committees and/or program departments for additional specific style guidelines.

- A. PRINT AND TYPE SIZE.** Decorative or unusual type faces are not acceptable. Print should be black and the characters consistently clear and dense. Lower case letters must have “true descenders,” e.g., y’s and p’s, etc., must extend below the printed line. The text body must be at a font size of at least 10pt, but no more than 12 pt.
- B. MARGINS.** A binding margin of 1-1/2" must be provided on the left. All other margins should be at least 1". Remember that in binding all edges of the paper are trimmed. The top margin of the first page of each new section should be 2"; the top margin of the half-title is 4". *Note: Because of the imprecision of the copying process, the specimen pages contained in this Guide may not adhere exactly to these specifications.* The format must follow the written instructions; the samples are included to illustrate layout only
- C. PAPER.** All library copies, ready for binding, must be printed on white paper that is 8.5" x 11", 20- pound weight, and acid-free.
- D. ILLUSTRATIVE MATERIAL.** Illustrative materials must be of the best quality available. This can include digitized images, charts, graphs and original photos. Materials must not exceed 8-1/2" x 11."

The heading on any page of illustrative material (e.g., “Table 1”) should be centered 2" below the top of the page; the legend of explanation, single or double spaced below the material. If it is not feasible to type on the illustrative material itself (as in the case of a photograph), a preliminary page containing heading and legend must be employed.

- E. REQUIRED COPIES.** At least five (5) copies of the thesis or dissertation must be prepared. Fisheries Science students are requested to submit one additional copy for archiving in the department. (The minimum copy requirement is listed in IYChecklist of Final Steps for Submitting Bind-Ready Copies of the Thesis or Dissertation)

Approval Pages are required for all copies of a student’s thesis or dissertation. Original signatures of all your committee members are required for the approval pages for all library copies. The other copies of the thesis or dissertation may have photocopied approval sheets.

IV. CHECK LIST OF FINAL STEPS FOR SUBMITTING BIND-READY COPIES OF THE THESIS OR DISSERTATIONS

The required copies of the thesis or dissertation, ready for binding, must be submitted to the Swem and Hargis Libraries no later than 5:00 p.m. on the date given in the SMS Catalog as the Last Day to Submit Theses and Dissertations for the desired conferral date (August, December or May). Prior to submitting the copies to the respective libraries, all binding, microfilming, copyright fees must be paid to the SMS/VIMS Cashier.

After submitting bind-ready copies to the libraries, candidates for graduation must check out with the SMS Graduate Registrar, submitting all required forms and/or receipts.

A. GENERAL INSTRUCTIONS

1. Prepare at least five (5) copies of thesis or dissertation

Note: W&M accepts only one copy for binding; all other copies must be submitted for binding to the Hargis Library.

Minimum Required Copies

- One (1) copy for the W&M Archives (acid-free paper required; original signatures on approval page)
- Two (2) copies for Hargis Library (acid-free paper required; original signatures on approval pages)
- One (1) copy for Major Professor
- One (1) copy for student

Attention: Fisheries Science Majors

- **One (1) additional acid-free copy**, increasing the total of all copies to **six (6)**, is requested for the library of the Fisheries Science Department. (Students whose major professors are members of the Fisheries Science Department should contact the department's chairperson regarding the extra copy and the possibility of departmental coverage for the costs of printing and binding the FS copy.)

2. Approval pages are required for all copies of a student's thesis or dissertation.

Original signatures of all your committee members are required for the Approval sheets of the **three library copies**. The other copies of the thesis or dissertation may have photocopied approval sheets.

continued

3. **Doctor of Philosophy Candidates only:**

In addition to submitting one copy of the dissertation to Swem Library the Ph.D. student must also submit the following:

- an Agreement Form
- *a copy of your title page
- *a copy of your abstract for University Microfilms

* *These copies are in addition to the copies required for your dissertation.*

B. First Steps to be Completed on the VIMS campus.

1. **Copies:** Submit at least **four** copies of your thesis or dissertation, ready for binding, to SMS/VIMS Library (Remember, if you are in the Department of Fisheries Science, **a fifth** copy of your thesis or dissertation is requested for the Fisheries Science library collection.)

Complete a binding fee assessment form with Hagis Librarian Diane Walker providing her with an account number if the binding costs are to be covered. If the costs are to be paid by the student, present & pay the assessed fees to the VIMS Cashier.

2. **Paying Fees:** The fee(s) for W&M may be paid at the same time as the fees for the SMS are paid. (Contact the SMS Graduate Registrar for a schedule of current binding, microfilming and copyright fees). However, present separate checks to the VIMS Cashier to pay (1) the SMS binding fees and (2) the W&M binding/other fees.

C. Steps to be Completed on the William and Mary Campus

Archives Copy, Swem Library: Submit **one** copy of the thesis/dissertation, ready for binding, to Swem Library's **Preservation Department**.

Ph.D. students must submit additional items to W&M, see A-3 of this check list.

Be prepared to present copies of receipts for binding, microfilming, etc.

NOTE: Cindy Sadler or her designated representative will receive the copy and any applicable receipts or forms. She will also sign a form verifying that you have submitted the required copy for the archives at Swem. Return this verification form (usually pink) to SMS Graduate School Registrar at VIMS (Watermen's 233).

continued

D. Final Check-Out on the VIMS Campus

Submit the following to the SMS Graduate Registrar in Watermen's Hall 233.

- ***VERIFICATION OF RECEIPT OF THESIS/DISSERTATION BY SWEM LIBRARY*** – must be by authorized Swem Library Staff in Preservation Department
- ***VERIFICATION OF RECEIPT OF THESIS/DISSERTATION BY HARGIS LIBRARY*** – must be signed by authorized Swem Librarian or Staff
- ***GRADUATE SURVEY FORM***
- ***CHECK-OUT FORM & COLLEGE ID CARD***
- ***SURVEY OF EARNED DOCTORATES FORM***, available from the SMS Graduate Registrar (required only of Ph.D. Students)

V. BIBLIOGRAPHY OF STANDARD GUIDES

The guides which are listed here should be consulted for matters of form and style in the various disciplines. Where conflicts occur between this VIMS Guide for Writers of Master's Theses and Doctoral Dissertations and the listed guides, the student should follow the instructions given in the introduction of this guide, or consult with his or her advisor

A Manual for Authors of Mathematical Papers. 8th edition. Providence, R.I.: American Mathematical Society, (1990), rev. ed.

Campbell, William G. Form and Style: Thesis, Reports, Term Papers. 13/e. Boston: Houghton Mifflin Co.

Scientific Style and Format; the CSE Editors' Manual for Authors, Editors, and Publishers, Seventh Edition (2006). American Institute of Biological Sciences.

Handbook for Authors of Papers in American Chemical Society Publications. Washington: American Chemical Society, 2nd. ed., 1997.

The Chicago Manual of Style. 15th ed. rev., Chicago: University of Chicago Press, 2003.

Turabian, Kate L. A Manual for Writers of Term Papers: Theses and Dissertation. 7th edition. Chicago: University of Chicago Press, 2007.

VI. SPECIMEN PAGES

Sample Pages of Theses and Dissertations. The following pages illustrate the form of the major elements in a thesis or dissertation, based upon the style previously discussed. Pay particular attention to spacing, placement of page numbers, margins, and capitalization on these pages.

Note: Because of the imprecision of the printing process, the sample pages contained in this Guide may not adhere exactly to these specifications. Typing must follow the written instructions; the samples are included to illustrate layout only

Sources of Mortality, Movements and Behavior
of Sea Turtles in Virginia

A Dissertation

Presented to

The Faculty of the School of Marine Science
The College of William and Mary in Virginia

In Partial Fulfillment

of the Requirements for the Degree of
Doctor of Philosophy

by

Ann E. Student

2007

Community Structure in Oligohaline Wetland Ecotones

A Thesis

Presented to

The Faculty of the School of Marine Science
The College of William and Mary in Virginia

In Partial Fulfillment
of the Requirements for the Degree of
Master of Science

by

Gerald G. Graduate

2007

APPROVAL SHEET

This thesis [or dissertation] is submitted in partial fulfillment of

the requirements for the degree of

Master of Science

[or Doctor of Philosophy]

Anne E. Student

Approved, by the Committee, August 2007

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Successful completion of this project would not have been possible without the forbearance, endurance, and unwarranted good humor of several of my fellow students. Notably, Alan Able and Harry Helper donated long hours assisting with field collections and Carrie Capable guided me through the statistical analyses. Finally the VIMS Information, Technology and Networking Services are to be commended for their collective interest and assistance in the construction of my data set.

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ABSTRACT

An analysis of the distribution and abundance of vegetation species in an oligohaline wetland documents the seasonal association patterns in ecotonal communities. Indices of relative dominance within and among seasonal associations are used to elucidate short term patterns in succession across the marsh-upland ecotone. The tendency for species to utilize vegetative or sexual reproduction and seasonal patterns in net above ground production are correlated with competitive success of species in the ecotone. Species producing propagules in mid-growing season are demonstrated to have a competitive disadvantage in the ecotone when physical stresses (i.e. tidal inundation and soil drainage) are low. When physical stresses are relatively high, by virtue of either sudden or repeated changes, no competitive advantage related to reproductive pattern can be demonstrated.

Long term trends of community structure in wetlands ecotones is documented by analysis of six sites originally sampled ten years ago. Predictions of competitive success derived from analysis of seasonal growth and reproduction patterns are substantiated in sixty-five percent of the observations. The results suggest at least one additional physical parameter (suspected to be soil nitrogen levels) is a significant determinant of successional patterns in these communities.

(One single spaced page, not over 500 words)

[NOTE: This is a specimen half-title]

Community Structure in Oligohaline Wetland Ecotones

INTRODUCTION

Oligohaline wetland vegetation communities are typically both diverse and compositionally variable. The ecotone between marsh and upland vegetation communities is particularly interesting as a site for analysis of successional trends. The interaction between biological and physical factors in the environment which determine competitive success and thus successional trends is complex but amenable to study in oligohaline wetlands.

Numerous researchers have studied the autecology of the dominant species in oligohaline ecotones. Howard and Jones (1983) summarized much of the available information and commented that:

Existing studies of the autecology of oligohaline wetland species might profitably be combined with *in situ* studies of physical parameters. The correlation of these two data bases should permit analysis of the relative importance of biological and physical factors in determination of community structure.

Studies of community structure in an ecotone through time will elucidate successional trends. Combining this information with an understanding of determinant factors for community structure in short biological time scales should permit a clearer understanding of the importance of biological and physical factors in directing successional trends (Isawa 1982). This approach has been successfully applied

MATERIALS AND METHODS

Site

The oligohaline wetland communities examined in this study are all located on the York River in Virginia. Sites were selected on the basis of salinity regime (1 to 10 ppt annual range), moderate elevational gradient (less than one percent slope) and absence of anthropogenic impacts (no development or surface modification within 500 meters). The six locations selected for study are indicated on Figure 1. Each location has an extensive (greater than 50 meters wide) marsh and an ecotone between marsh and upland at least 10 meters wide.

Sampling Methodology

The vegetation community at each site was sampled four times during 1984. Samplings were timed to coincide with the start of the growing season (April), mid-summer (June and August) and the end of the growing season (October). In each time period, permanent transects extending from mid-marsh to a point 20 meters past the beginning of the uplands community were sampled at randomly selected points. At each point the vegetation within a one meter square plot was censused for species composition, cover and basal area. In adjacent areas along each transect, 35 individual plants of each of the 10 dominant plant species were harvested and returned to the laboratory. The individual plants were used for determination of morphometric characteristics and reproductive state. Classification of reproductive states was based on the methodology proposed by Tail (1958) and

TABLE 3

FREQUENCY OF OCCURRENCE OF SPECIES IN SEASONAL COLLECTIONS

or

TABLE 3. Frequency of Occurrence of Species in Seasonal Collections.

Species	April	June	August	October
<i>Sagittariafalcata</i>	0.01	0.01	<0.01	<0.01
<i>Sagittaria latifolia</i>	0.02	0.02	<0.01	<0.01
<i>Typha angustifolia</i>	0.08	0.07	0.13	0.16
<i>Typha latifolia</i>	0.09	0.15	0.19	0.23
<i>Hibiscus moscheutos</i>	0.10	0.15	0.15	0.08
<i>Panicum virgatum</i>	0.22	0.20	0.20	0.23
<i>Myrica cerifera</i>	<0.01	<0.01	<0.01	<0.01
<i>Ivafrutescens</i>	0.10	0.10	0.10	0.10
<i>Baccharis halimifolia</i>	0.05	0.05	0.05	0.05
<i>Distichlis spicata</i>	0.15	0.10	0.05	0.05
<i>Spartina pa tens</i>	0.18	0.15	0.13	0.10

APPENDIX

Glossary of “Beach Terms” adapted from
U.S. Army Coastal Engineering Research Center (1973)

BACKSHORE - That zone of the shore or beach lying between the foreshore and the coastline and acted upon by waves only during severe storms, especially when combined with exceptionally high water. Also **BACKBEACH**. It comprises the **BERM** or **BERMS**.

BACKRUSH - The seaward return of the water following the uprush of the waves. For any given tide stage, the point of farthest return seaward of the backrush is known as the **LIMIT** of **BACKRUSH** or **LIMIT BACKWASH**.

BAR - A submerged or emerged embankment of sand, gravel, or other unconsolidated or consolidated material over which water flows.

BEACH BERM- A nearly horizontal part of the beach or backshore formed by the deposit of sand, gravel or mud. Some beaches have no berms, others have one or several.

BEACH FACE - The section of the beach normally exposed to the action of the wave uprush. The **FORESHOE** of a **BEACH**.

CREST OF BERM - The seaward limit of a berme. Also **BERM EDGE**.

FORESHORE - The part of the shore lying between the crest of the seaward berm (or upper limit of wave wash at high tide) and the ordinary low water mark that is ordinarily traversed by the uprush and backrush of the waves as the tides rise and fall.

LITFORAL CURRENT - Any current in the zone extending seaward from the shoreline to just beyond the breaker zone, caused primarily by wave action, e.g., longshore current, rip current.

LONGSHORE BAR - A bar running longer than five meters situated somewhere close to a shoreline.

LONGSHORE TROUGH - An elongate depression formed in the foreshore or in the bottom just offshore by waves or tidal currents.

OFFSHORE - The comparatively flat zone of variable width, extending from the breaker zone to the seaward edge of the Continental Shelf.

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VITA

ANN E. STUDENT

Born in Ordinary Virginia, 31 April 1980. Graduated from Hometown Senior High School in 1998. Earned B.A. in Modern Sciences from Outstanding University in 2002. Received M.S. in Continuing Education from Most Outstanding State University in 2005. Entered doctoral program in College of William and Mary, School of Marine Science in 2006.