

DISSERTATION GUIDELINES

ARRANGEMENT OF THE DISSERTATION:

Each dissertation must be arranged in the order listed below. Specific information about each section is on the following pages. Italicized pages are optional.

- Title Page
- *Copyright Page (optional)*
- Abstract
- *Acknowledgment Page (optional)*
- *Preface (optional)*
- *List of Abbreviations (optional)*
- *Glossary (optional)*
- *Nomenclature (optional)*
- *Dedication (optional)*
- Table of Contents
- Lists of Tables, Illustrations, Figures, or Graphs
- Introduction
- Text Body (divided into chapters following a logical outline)
- Tables, Illustrations, Figures, Graphs: If not incorporated into the main body of the text, these items should immediately follow the text, not at the end of chapters.
- References
- *Appendices (optional)*
- *Vita (optional)*

FORMATTING AND LAYOUT REQUIREMENTS:

PAGE SIZE

- Page size should be 8.50 x 11.00 inches, standard US Letter size.

MARGINS

- One (1) inch on all sides, including page numbers.
- Page numbers should be at least 1 inch from the top and right-hand edges of the page.

SPACING

- The preliminary pages and text must be double-spaced.
- Under certain conditions, quotations may be single-spaced, if recommended by an approved style manual.
- Table of Contents and lists with lengthy entries may be single spaced with a double-space between entries.
- References may be single-spaced, with a double-space between entries.

PAGINATION

- Every page in a dissertation is numbered, except the title page.
- Page numbering will begin on the second page with Arabic numeral 2 in the upper right-hand corner of the page.
- No empty pages
- On pages of the dissertation that are formatted with landscape orientation, the page number must appear in the upper right-hand corner when the page is rotated to portrait orientation.

FORMATTING AND LAYOUT REQUIREMENTS:

TITLE PAGE

NORTHWESTERN UNIVERSITY

{TITLE; e.g., Title of Dissertation in Title Case Goes Here}

A DISSERTATION

SUBMITTED TO THE DEPARTMENT IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS

for the degree

MASTER OF SCIENCE

Field of NEUROBIOLOGY

By

{Full Name}

EVANSTON, ILLINOIS

{Month and year of degree conferral – ask MS program if not sure}

DISSERTATION TITLE GUIDELINES

Dissertations are a valuable resource for other scholars only if they can be easily located. Modern retrieval systems generally use the words in the title to locate a document. It is essential that the title be an accurate and meaningful description of the content and that obscure references be avoided. Please use these guidelines when formulating a dissertation title:

CASE: The first and last words and all nouns, pronouns, adjectives, verbs, and adverbs (if, because, as, that, etc.) are capitalized. Articles (a, an, the), coordinating conjunctions (and, but, or, for, nor), and prepositions, regardless of length, are lowercased unless they are the first or last word of the title or subtitle. Only acronyms should be set in full capitals.

Examples:

Power and Consumer Behavior

Outpatient Treatment for Children: Organizational Practices as Predictors of Recovery

A Comparison of the Methodologies for Determining Achievement in High School

HYPHENATION: Consult the dictionary as to whether or not a word is hyphenated. In general, do not hyphenate words beginning with the prefixes co, non, pre, post, or re unless there is a possibility of confusion (co-op, post-master's) or the root word begins with a capital letter (post-Renaissance). Hyphenate words beginning with the prefix *self*. Hyphenate compounds used as adjectives (decision-making) but not as nouns (decision maker). Part-time is always hyphenated. When more than one prefix is joined to a base word, hyphenate the prefixes standing alone (micro- and macroeconomics). Do not hyphenate fundraising, freelance, yearlong, health care, African American, Asian American.

Examples:

Great Nonfiction Works of the Nineteenth Century (Instead of: Great Non-fiction Works of the 19th Century)

SPELLING AND GRAMMAR: Dissertation titles should be spell-checked and dictionary spelling of words should be used. Use “and” rather than “&”, and spell out names of centuries and other numbers usually spelled out in text.

Example: The Labour Party in Perspective and Twelve Years Later

SPECIAL CHARACTERS: No special characters should appear in the dissertation title (SES/CAESAR cannot accommodate special characters). Terms or phrases that include special characters should instead be written out.

Examples:

Evaluation of DNA Hybridization and Cleavage Capabilities of Peptide Nucleic Acid-Titanium Dioxide (instead of: Evaluation of DNA Hybridization and Cleavage Capabilities of PNA-TiO₂)

The Role of TGF-beta Variants in Cancer (instead of: The Role of TGF-β Variants in Cancer)

ITALICIZATION: Italics should only be used in dissertation titles when referring to the title of a published work, foreign language words, gene names, scientific names as appropriate, or other words that are usually italicized.

Examples:

Techniques in *Drosophila* Circadian Biology

Mechanisms of Differentiated Cell Function *In Vitro*

APOSTROPHES: Do not use to form plurals (it should be 1940s, not 1940's) unless it would be confusing without (thus A's and B's, not As and Bs; p's, not ps).

Possessives of singular nouns ending in s are formed by adding 's (e.g., Russ's dog).

COPYRIGHT PAGE

If you choose to copyright your manuscript, a copyright notice must appear on a separate page following the title page. It should read as follows:

© Copyright by (your name) 20__
All Rights Reserved

ABSTRACT

- The abstract should be **no more than 350 words**.
- Inclusion of the abstract within the preliminary pages of the dissertation is required.
- The abstract should provide an accurate summary of the contents of the dissertation, including a statement of the problem, the procedures or methods used, the results, and the conclusions.
- Mathematical formulas, photographs, diagrams, and other illustrative materials are not recommended for inclusion in the abstract.

OPTIONAL PREFATORY PAGES

- Acknowledgment page
- Preface
- List of abbreviations
- Glossary
- Nomenclature
- Dedication

TABLE OF CONTENTS

- The format of the table of contents should conform to the guidelines in an approved style manual.
- It is important that the table of contents accurately reflect the outline and organization of the manuscript.

LISTS OF TABLES, ILLUSTRATIONS, FIGURES, OR GRAPHS

- These lists should reproduce the specific titles and page locations of all illustrative materials.

INTRODUCTION

- This optional section should provide an overview of the dissertation and the research problem that is being addressed. It should also indicate how the research and argument presented will contribute to scholarship in the field.

BODY OF THE TEXT

- Chapters should follow a logical outline, with a clear distinction between chapters, main heads within chapters, and subordinate heads within the main heads.
- The outline and organization of the main body of the text should be accurately reflected in the table of contents.

- All non-textual elements (e.g., tables, graphs, and images) must be described in the text.

TABLES, ILLUSTRATIONS, FIGURES, GRAPHS

- If not incorporated into the main body of the text, these items should immediately follow the text, not at the end of chapters.
- Margin requirements must be met on all pages that contain charts, graphs, tables, or illustrations. If the title, legend, or description of an illustration is too long to be placed on the same page with the illustration, it must be placed on a separate numbered page preceding the illustration.
- Must be numbered; they must include legends, and be easily legible. It is highly recommended that each figure and legend be printed on a separate page. Although tables and graphs do not need to be printed on separate pages, they must fit within margins and onto the page cleanly.
- All text and fonts on figures and legends must be the same and consistent throughout the entire thesis. Legends should be blocked and numbered independently. Below is an example of a table and a figure.

Treatment	Volume of Tissue Analyzed (μm^3)	Number of Inhibitory Varicosities Reconstructed	Density of Inhibitory Varicosities ($1/\mu\text{m}^3$)	Average Volume of Inhibitory Varicosities (μm^3)	Proportion of Inhibitory Varicosities that Contain Mitochondria	Average Number of Synapses per Inhibitory Varicosity
Oil (n = 4)						
<i>Mean \pm SEM</i>	176 \pm 12	27.5 \pm 2.9	0.17 \pm 0.01	0.28 \pm 0.03	0.77 \pm 0.05	1.26 \pm 0.11
<i>Range</i>	141 - 195	21 - 35	0.12 – 0.19	0.01 – 1.41	0.69 – 0.86	0 - 6
Estradiol (n = 4)						
<i>Mean \pm SEM</i>	180 \pm 11	27.3 \pm 4.4	0.15 \pm 0.02	0.34 \pm 0.02	0.80 \pm 0.05	1.20 \pm 0.09
<i>Range</i>	154 - 202	17 - 35	0.10 – 0.19	0.04 – 1.35	0.65 – 0.88	0 - 7

Table 1. Tissue analyzed in the pyramidal cell layer from oil and estradiol treated rats did not statistically differ. Between oil and estradiol groups, tissue did not differ on the basis of the volume of tissue analyzed, number of inhibitory varicosities reconstructed, density of inhibitory varicosities, average volume of inhibitory varicosities, proportion of inhibitory varicosities that contain mitochondria, or average number of synaptic contacts per inhibitory varicosity (all p values > 0.10).

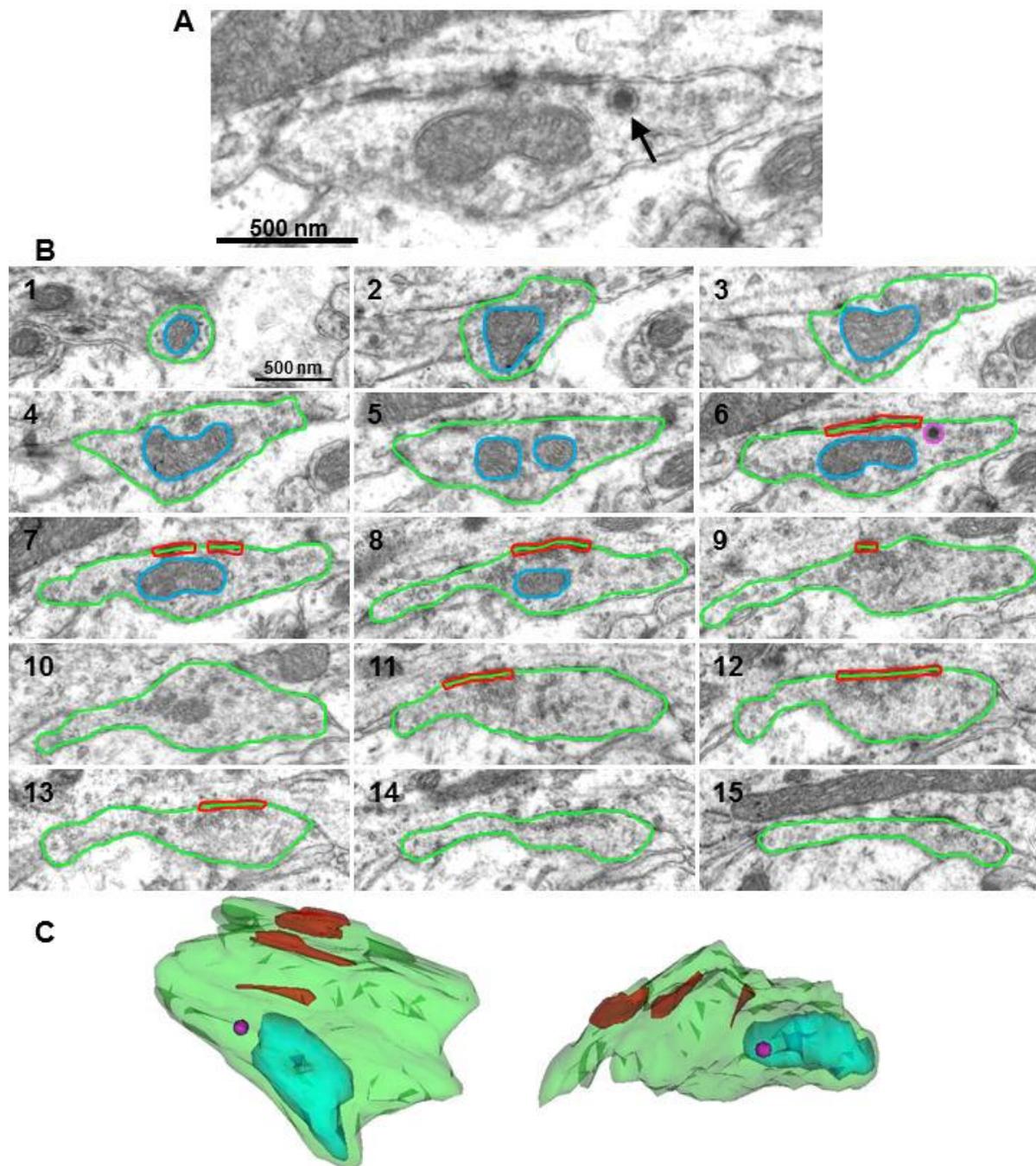


Figure 4. **A**, Electron micrograph of a DCV in an inhibitory varicosity in the pyramidal cell layer. The image in panel A is the same as that shown in Fig. 1. **B**, Use of Reconstruct software to trace a subset of serial electron micrographs (1-15) from a total of 32 sections for an inhibitory varicosity that originates as an axon, develops into a bouton, and terminates as an axon (green); the mitochondrion (blue), synapses (red), and DCV (magenta) contained within the varicosity are additionally traced. **C**, Two views of three dimensional reconstructions for the traced varicosity and associated mitochondrion, synapses, and DCV.

REFERENCES

- Each dissertation must include references to document the text.
- These references may be included at the bottom of the page or at the end of the text, but cannot be placed at the end of each chapter.
- The format for references must conform to the guidelines in an approved style manual.
- There are two options for formatting references. You may select a standard formatting style that is used by a prominent journal within your field (consult with your advisor), or follow the examples below.

Journal Articles:

The authors' names, year, complete title, journal name (italicized), volume, and page numbers must be included.

Example:

Smith, A.L., Jones, B.G. and Johnson, V.M. (1999) The effect of shoveling snow on heart rate. *Journal of Cardiology*, 124:456-488.

Book Chapters:

The authors names, year, chapter title, book title (underlined), editors, publisher, city/state in which the work was published, and page numbers must be included.

Example:

Smith, A.L., Jones, B.G. and Johnson, V.M. (1998) The relationships between tachycardia and physical stress. In: Stress and the Heart. Eds., J. Matthews, C.A. Benson and J.J. Carlson. Clinical Press, N.Y. pp. 34-56.

APPENDICES (optional)

- The format for the appendices must conform to the guidelines in an approved style manual.

VITA (optional)

- It is recommended that each copy of the dissertation include a brief vita containing the author's name, place of birth, education, relevant professional experience, and publications. The vita page is numbered.

BINDING AND FINAL THESIS SUBMISSION

- Convert your document to PDF and email to the Neurobiology Program Assistant at neurobiology@northwestern.edu. The department will print and bind three copies: one for you, one for your advisor, and one for the department. You will need to leave a mailing address with the department Program Assistant to receive your thesis.

COMMON DISSERTATION FORMATTING PITFALLS CHECKLIST:

There are several common formatting problems that require resubmission and re-review of the dissertation. Please check this list to ensure your dissertation is correctly formatted:

- Are your margins correctly sized (including page numbers) such that there is one (1) inch on all sides?
- Are your pages numbered starting on the second page with the number two (2) (**not** Roman numerals) in the upper right-hand corner of the page?
- Are your page numbers properly placed in the upper right-hand corner of the page, one (1) inch from the top and one (1) inch from the right edge of the page?
- Are all of your pages numbered except for the title page?
- On pages with landscape formatting, does the page number appear in the upper right-hand corner if the page were rotated to portrait orientation?
- Is your page size 8.50 x 11.00 (regular US letter size)?
- Does your title page include the correct location – EVANSTON, ILLINOIS (not CHICAGO, ILLINOIS)?
- Does your title page include the correct date? The date should be the month and year you will receive the degree, for example: June 2021
- Are your pages ordered properly, with the title page first, followed by the copyright page (if you are including one), then the abstract page?