

**NSURS Thesis Format<sup>1</sup>**  
**General Instructions and Guidelines for Student Authors**  
**Biology Department**

**Minimum Formatting Guidelines**

- The entire manuscript must be double-spaced (title page, text, figure legends, literature cited, etc.) with a 12-point font.
- The target length for a thesis is 20-30 pages double spaced (from title page to the final figure)
- Please use a conventional font, such as Calibri, Cambria, or Times New Roman.
- Leave a 1 inch (2.54-cm) margin on all sides of each page.
- Page size should be Letter 8 ½" by 11".
- Do not justify the right margin.
- Number all pages (including tables, and figures), starting with the title page.
- Acceptable file formats for the NSURS thesis are MS Word (.doc, .docx) or PDF

Student NSURS theses must include the following components: Title Page, Abstract, Introduction, Methods, Results, Discussion, Literature Cited, Acknowledgements, Tables, and Figures.

**1. Title Page**

This page must include (in the following order):

- i. A short, descriptive title that conveys the key findings of the research in an active voice. The title should be centered and written in boldface font. Latin binomials in a title should be italicized.
- ii. The name of the student author and institutional affiliation (department / name of the college)
- iii. The name of the primary advisor, followed by the names of the research committee members.
- iv. The semester / year in which the thesis is submitted (e.g., Spring 2015)

**2. Abstract Page**

The Biology Department requires abstracts for each NSURS thesis. The abstract must be **300 words or less** and include the following information:

- Premise of the study (why the work was done, what major biological questions are addressed, and why it is important or interesting)
- Methods
- Key results
- Conclusions (what major points should the reader take from this work)

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<sup>1</sup> Based on the guidelines for article submission to *Ecology*, *Journal of Cell Biology*, & *American Journal of Botany*

Note that the abstract will featured on the NSURS webpage and in a searchable database and thus should capture the interest of the general scientific community (not just the specialists) and include the most important contribution of this paper. Avoid citations in the abstract.

Provide a list of 3–10 “Key words.” Capitalize proper nouns, place in alphabetical order, and separate by semicolons.

### **3. Main Text**

In the first paragraph of the **Introduction**, include the theoretical or conceptual basis for your work in a context accessible to both WWC faculty and upper level science students.

In **Methods** include a brief description of your study system, your experimental methodology, and methods used for data analysis. Also be sure to indicate the name, city, spelled-out state (if in USA), and country of manufacturers / suppliers after brand names.

If statistical analyses are used, include statistical findings in the **Results**, either in the text or within tables. Include the statistic value, degrees of freedom, and p-value for each result reported (e.g., for a t-test report "t = 32.41, df = 1, P = 0.03" for an ANOVA report "F<sub>5, 23</sub> = 26.45, P < 0.001" [note two df-values as subscripts with F]).

Include a summary of conclusions and a take-home message for the generally informed reader in the **Discussion**.

Center main headings and write them in boldface font: **Introduction, Methods, Results, and Discussion**.

Indent subheadings at the start of a paragraph; capitalize only the first word and proper nouns and adjectives.

- Second-level headings—(boldface italic followed by an em dash)
- Third-level headings—(italic followed by an em dash)

### **4. Acknowledgements**

Place acknowledgments here in 1-2 separate paragraphs. Be sure to acknowledge any sources of funding (e.g., Pugh Grant, Yarbrough Grant, Biology Department) here.

### **5. Literature Cited**

Verify all entries against original sources. Double check that all references in the manuscript text are in the Literature Cited and vice-versa and that they agree in spelling and year.

#### ***Literature citations in text—***

Cite references in chronological order (oldest first); within a given year, order them alphabetically (e.g., Jones and Gil, 2010, 2014) (e.g., Ashton et al., 2011; Brown, 2011; Jackson, 2012, 2014).

Single author: Jones (2014) or (Jones, 2014). Two authors: Jones and Gil (2014) or (Jones and Gil, 2014). More than two authors: Jones et al. (2014) or (Jones et al., 2014).

Manuscripts accepted for publication but not yet published: Jones (in press) or (Jones, in press). Include “In press” citations in LITERATURE CITED (shown later).

Unpublished data and manuscripts (e.g., submitted, in prep.) and personal communication: (F. Jones, Institution, unpublished data [or unpublished manuscript or personal observation]). These are not included in LITERATURE CITED.

### ***References listed in LITERATURE CITED—***

List citations in alphabetical order by author. Single-author titles precede multi-authored titles by the same senior author, regardless of date.

List works by the same author(s) chronologically, beginning with earliest date of publication. Spell out all author(s) names. Use “a”, “b” (determined alphabetically) for works with the same author(s) and year citation.

For multi-authored works, list the first seven authors and then “et al.” If there are only eight authors, then list all eight.

For formatting examples (note spacing, capitalization, italics, etc.), go to a recent article in the journal *Ecology* or *Evolution* and consult with your primary advisor.

## **6. Tables**

These can be integrated within the main text **OR** placed immediately after Literature Cited. Tables need to be formatted using the Table feature in Word or in a spreadsheet such as Excel.

Number tables with Arabic numerals followed by a period. Capitalize first word of title; all others, except proper nouns, are lowercase; spell out names of genera and abbreviations on first mention; place period at end. Include study organism (species or group) and geographic location in each caption when appropriate. Place explanatory notes and define all abbreviations below the table after the heading “Note:” or “Notes:”. Place footnotes after the Notes.

Every column must have an appropriately placed heading (esp. the first at left—the stub head), with appropriate subheadings. In the body of the table, capitalize the first word of each entry (and proper nouns); do not use vertical lines between columns; indicate footnotes by lowercase superscript letters.

## **7. Figures**

These can be integrated within the main text **OR** placed immediately after the Tables.

Use consistent style, font, and font size (between 6 and 10 pt.) for all figures. Use of standard fonts (Times New Roman, Helvetica, Calibri) gives better results.

For figures with multiple elements (photos, drawings, or graphs), group elements in a rectangle or square and label the top left corner of each element with a capital letter (e.g., A, B). Keep elements close together for best use of space. Photographs in a composite plate should each be numbered and separated by a thin line or blank space.

Label axes; include Standard International (SI) Units of measure in parentheses; capitalize only the first letter of the first word (e.g., "Stem growth (%)"). Axis label should be c. 0.2 cm from units on axis, but no more than 0.5 cm; x- and y-axis labels should be equidistant from axes. Use abbreviations consistently in the text and figures.

For magnified illustrations, provide a scale bar defined in either the figure itself or at the end of the legend.

***Each figure must have a figure legend.*** Each figure legend must be complete and informative so that reference to the text is not necessary to understand the content of the figure.

Abbreviations should be defined unless they are standard convention (e.g., cm).

For figures with multiple lettered panels, a general title for the figure should be followed by a description of each panel (e.g., Fig. 5. Relationship between... (A) All fruits. (B) Fruits less than 0.5 mm.). When applicable, study organism (species or group) or geographic location, and define scale bar (e.g., Bar = 0.1  $\mu\text{m}$ ). For micrographs, include pertinent information such as magnification and type of section, stain, optics, or special techniques.

Define all symbols and abbreviations either in a key within the figure or in the legend. Place figure abbreviations in alphabetical order and format as follows: c, cell; n, nucleus.

## **8. Appendices (optional)**

Appendices are an option if there are additional data or information that the student would like to present, but that are not part of the Tables and Figures. Include appendices immediately after the figures. Provide an appendix title, and a sentence-style row of headings for each item presented in the appendices.