

GUIDELINES FOR FORMATTING  
AN HONORS THESIS

The Science Honors Research Program  
Central Washington University  
Ellensburg, WA

2008 EDITION



## **Introduction**

All students enrolled in the Science Honors Research Program at CWU are required to submit an original honors thesis that communicates the results of his or her honors research project. The purpose of the thesis is to communicate to an audience of your peers the essential features of your research experience, including your goals, methodologies, and conclusions, and to demonstrate your understanding of scientific concepts and methods relevant to your discipline.

The success of your thesis will not be based on the volume of results or completeness of the study, but rather the care and thoroughness with which you address the following elements of a scientific investigation:

- a meaningful and well-formed question or hypothesis
- a review of appropriate literature as a means to define the terms and context of the general aim
- a description of methods and techniques that permits an independent reader to reproduce the work and/or to assess its validity
- a presentation of results and their meaning
- a discussion of the significance of the results in the context of the project's original goals

The basic format of the thesis should resemble that of a scientific journal article; you should discuss with your faculty advisor the appropriate model to use. See the following section on style guidelines for more information. Your thesis will have three structural elements: front matter, the body, and back matter. See the section entitled "Components of a thesis" on p. 6 of these guidelines for details regarding the front and back matter.

In general, the body of your thesis should include the following organizational elements:

- Introduction: goals of the project; why it is interesting and/or important
- Background: what aspects of this problem have been studied before and by whom
- Theory: development of the analytical basis of your study (e.g. hypothesis or predictions) from established knowledge in your field
- Methods: detailed description of procedures and apparatus
- Results: presentation of data in a way that is easy to interpret; should include measurement uncertainties
- Discussion: description of the results in the context of your hypothesis and understanding of uncertainties or other limitations; significance of results

Some of the above elements may be combined into a single section of the thesis. The specific arrangement will depend on the traditional style of your discipline.

The purpose of these format guidelines is to ensure a reasonable degree of uniformity among all the theses written under the auspices of the Honors Program, while accommodating the discipline-specific needs of thesis writers in each academic field.

Specific topics addressed by these format guidelines include:

- a list of style manuals (or journal formats) most often preferred by the science faculty at CWU
- format specifications for the front matter
- margins and spacing
- necessary divisions within the thesis
- acceptable ways of handling figures and tables
- the bibliography

### **Recommended Manuals of Style**

Below is a list of style guides that have been approved by CWU Science Honors faculty. You should discuss with your advisor the specific report style you will follow in your Honors thesis. Whatever the style guide you adopt for your project, you should follow this general rule: if a conflict occurs between these Honors Program guidelines and the discipline-specific style guide, then the Honors Program guidelines should take precedence. Where neither departmental nor Honors Program specifications resolve a question, you should refer to *Turabian's Manual for Writers of Term Papers, Theses, and Dissertations* (copies of this are available in the CWU library and the Douglas Honors College library). Consistency in style throughout the thesis is paramount.

- American Institute of Physics Publication Board. *American Institute of Physics Style Manual. 4th ed.* New York. American Institute of Physics, 1990. (physics)
- Council of Biology Editors Style Manual Committee. *Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers. 6th ed.* New York. Cambridge University Press, 2002. (biology)
- Dodd, Janet S., ed. *The ACS Style Guide: A Manual for Authors and Editors.* American Chemical Society, 1997. (chemistry)
- Hansen, Wallace R., ed. *Suggestions to Authors of the Reports of the United States Geological Survey.* (7th ed.) U.S. Government Printing Office, 1991. (geology)
- The Chicago Manual of Style. 15th ed. Chicago: University of Chicago Press, 2003.
- Waldron et al. *Physical Review Style and Notation Guide.* The American Physical Society, 1993.

## **Typeface and Size**

Do not use ornamental typefaces. A serif font is required within the body of the document and preferred throughout, although some exceptions can be made in other areas, with the approval of the faculty advisor. Use 12-point font size throughout the body of the document, with 10-point type for footnotes and endnotes. Size 14-point type is used only for section titles. Within maps and other figures, a range of type sizes is acceptable, so long as reduction to page size does not render lettering and numbering illegible. In general, you should italicize rather than underscore.

## **Margins**

All typing (except for pagination) and all parts of tables, figures, and appendices must fit within the specified margins: 1.5 inches on the left (the binding edge); 1.0 inch at the top, bottom, and right edges.

## **Spacing**

Double-space the text throughout except for the following: Captions for tables and legends for figures are single-spaced. Block quotations are single-spaced. In the bibliography, single-space within entries, but double-space between entries. Likewise, footnotes or endnotes are single-spaced within and double-spaced between entries. Do not allow typed pages to have “widows” (a single line that ends a paragraph and is printed alone at the top of a new page) or “orphans” (the first line of a paragraph that is stranded at the bottom line of a page). Avoid breaking a bibliography entry onto a following page.

## **Placement of Page Numbers**

Every page in the body of the thesis, including references, should be labeled with an arabic numeral, beginning with ‘1’ on the first page of section one. Pages that precede the beginning of section one are referred to as preliminary pages. Some preliminary pages do not bear page numbers (e.g., signature and title pages), whereas the paginated preliminary pages (e.g., abstract, table of contents, list of figures, list of tables, preface, acknowledgments, dedication) carry lowercase Roman numerals centered at the bottom of the page.

Page numbers are the only typing on any page that goes outside of the margins specified above. Pages numbered at the top of the page are to be placed 1.0 inch in from the right edge with the bottom of the numeral at 0.75 inch down from the top edge of the paper. Numbers on pages in the body of each section will appear in the upper-right corner. For pages having page numbers located at the bottom of the page (paginated preliminary pages, first page of each section, appendices separator page), the page numbers are

to be centered between the left and right margins with the top of the numeral placed 0.75 inch from the bottom edge of the paper. (This usually means that the header and footer margin settings should be set at between 0.60 and 0.65 inch.)

### **Justification and Hyphenation**

Align text at the left margin (except for paragraph indentations). The right margin may be either uneven or right-justified; select the form of justification that is appropriate for your discipline. Hyphenation at the right margin is permitted as long as it does not lead to ambiguity or cause difficulty in reading.

### **Footnotes or Endnotes**

- If your department or faculty advisor requires footnotes, or if you otherwise elect to use footnotes to cite your sources and to supplement your claims, as allowed by your selected style guide, there are several rules which must be followed. It is wise to learn how to format footnotes before attempting to use them, so as to avoid troublesome formatting problems in the final arrangement of the document.
- Use superscript numerals within the text at the point of reference. Footnotes are numbered consecutively by section (i.e., each section begins with number one).
- Footnotes are separated from the text by a short rule, or separator line. When a footnote is continued to the next page, a full-length line may be used.
- The one-inch margin is maintained at the bottom of each page except on the last page of the section. When the text of the section's last page does not fill the entire page, the footnotes for that page follow directly under the text.
- The footnote number (which begins the first line of each footnote) is indented the same as the paragraph indentation in the text. Within the footnote, the numeral may be typed superscript (with no space following the numeral, before the text) or on the line followed by a period (with a space following the period, before the text).
- Each footnote is single spaced, with a double-space between footnotes.
- Footnotes should be typed in 10-point font. If you and your faculty mentor decide upon endnotes rather than footnotes, then you must use the same spacing, indentation, and font requirements described for footnotes (directly above). Arrange endnotes by section, with the "Endnotes" section beginning on the next page after a given section concludes (the title "Endnotes" will be a level two heading - see immediately below).

## Headings

Four levels of headings and subheadings are generally available for use in an Honors thesis. The first level, used to designate the section number and title, is centered and typed in boldface uppercase 14 point font. This is the *only* instance of 14 point font. The section number (spelled out) appears on the first line, with the section title below. The second level, used to identify major subsections, begins with a numerical designation flush with the left margin, followed by two spaces and the name of the subsection; this line should be boldfaced, with important words capitalized. The numerical designation has the form *a.b*, where *a* is the section number, and *b* is the subsection number. The third level, for secondary subsections, has the same format as the second level, except that it is italicized, rather than boldfaced, and only the first word is capitalized; the numerical designation has the form *a.b.c*, with *c* enumerating the secondary subsection. After either the second or third-level heading, skip a line before beginning the text. The fourth level, for tertiary subsections, is established with an indented and italicized paragraph heading typed in lowercase and ending in a period, followed by two spaces; text continues after the heading on the same line. No numerical designation is used for fourth-level headings.

These heading levels are illustrated in the following example:

## **SECTION TWO** [level 1]

(skip line)

### **METHODS** [level 1]

(skip line)

(skip line)

#### **2.1 Apparatus and Instrumentation** [level 2]

(skip line)

[body of text]

(skip line)

(skip line)

#### **2.2 Procedures** [level 2]

(skip line)

##### *2.2.1 Determination of elastic constants* [level 3]

(skip line)

*Compression.* [level 4: text continues on this line]

(skip line)

*Extension.* [level 4: text continues on this line]

To enhance separation of sections of text, leave a triple-space (two skipped lines) above level 2 headings and a double-space above headings of level 3 and 4 (as shown above). A double-space should follow level 2, 3, and 4 headings. When a heading exceeds a single line of text, the heading should be single spaced, maintaining the specified spacing above and below it.

Every section must have a level-one heading; other headings (for different levels of sub-sections) may be used at the thesis writer's discretion. Use these structural divisions to highlight and to reinforce divisions of content within your thesis.

### **Components of a thesis**

The document consists of four sets of pages: unpaginated preliminary pages, paginated preliminary pages, the body of the thesis, and reference pages. This section of the guidelines indicates the sequence of these pages and specifications pertaining to them. Following is a quick reference of the order of pages.

Explanations are included under each paragraph heading. *Please note that only the signature page, the title page, the table of contents, the abstract, the body sections, and the bibliography are required components of an Honors thesis.*

#### *Order of Components:*

- Title page (required)
- Signature page (required)
- Abstract (required) (first paginated preliminary page)
- Table of Contents (required)
- List of Figures
- List of Tables
- Preface
- Acknowledgments
- Dedication
- Epigraph
- Body of thesis, divided into sections (required)
- Endnotes (if used)
- Appendices
- Bibliography (required)
- Index

### **Unpaginated Preliminary Pages**

#### *Abstract*

The abstract briefly summarizes the contents of the document. For an Honors thesis, an abstract should be limited to 150 words. The word "ABSTRACT" is a first-level heading and is capitalized, centered, and positioned 2.5 inches below the top of the page. After a double-space, type (centered) the full title of the Honors thesis in uppercase and lowercase lettering (i.e., headline style: Turabian, 4.6-4.8). Titles of two

or more lines are single-spaced. After another double-space, type (centered) your full name in uppercase and lowercase lettering exactly as written on the title page. After another double-space, type (centered) “Faculty mentor:” followed by the full name of the faculty mentor and his/her degree in uppercase and lowercase lettering. The body of the abstract then begins after a triple-space with the first line indented. Text of the Abstract is double spaced. As for all other pages in the document, the margins are 1.5 inches on the left and 1.0 inch at top, right, and bottom. The Abstract page is an uncounted, unpaginated page.

### *Title Page*

The title is typed in capitalized lettering, centered, and positioned around 2 inches below the top of the page. If the title is longer than will fit on one line, then type the rest of the title after a double-space. At approximately 4.5 inches below the very top of the page, begin typing the next seven lines in uppercase and lowercase lettering as shown in the example provided in the Appendix. At approximately 7.5 inches below the top of the page, type “By”. After a double-space, type your name. The final two lines begin approximately 1.75 inches from the very bottom. After typing “Ellensburg, Washington” double-space and type the month and year of graduation without a comma between the month and year. The title page is counted as page “i”, *but the page number is not typed onto this page.*

### **Paginated Preliminary Pages**

#### *Table of Contents*

This section is required for all Honors theses. The title of this section is typed as a first-level heading, centered and all uppercase, approximately 1.5 inches from the top of the page, followed by a triple-space (two blank lines). Include in the Table of Contents all elements of your thesis that follow after the Table of Contents (i.e., list of figures, list of tables, preface, acknowledgments, dedication, epigraph, the various sections of the text, and the various references pages, such as appendices, bibliography, etc.). The first page of the Table of Contents is page “ii” (lowercase Roman-numeral pagination is centered and placed 0.75 inch from the bottom of the page). This is the first page where numbering is shown.

Many styles are acceptable for the Table of Contents; Turabian (14.19) offers a suitable example.

Whatever the style adopted, the following must be incorporated: Include at least the first heading level (section number, spelled out, and section title). Right-justify the page numbers (but not the entire line) for each included heading. On the lines bearing page numbers, the space between the last word of the heading and the page number may be left blank or may be occupied by ellipsis points. If ellipsis points are used, then they must be aligned vertically throughout the Table of Contents, using tabs in the ruler. [Note: With regard to ellipsis points, the Table of Contents, the list of figures and the list of tables (if either of the

latter are used) should all follow the same style.] Double-space between headings, but single-space and indent any continuation lines of the same heading.

#### *List of Figures and List of Tables*

One or both of these pages may be used if any figures (illustrations) or tables are included in the document. The titles of these sections are typed as first-level headings, centered and all uppercase, approximately 1.5 inches from the top of the page, followed by a triple-space. These lists are paginated with lowercase Roman numerals centered, and placed 0.75 inch from the bottom of the page. If the legend to a figure or caption to a table is brief, then include the entire legend or caption in the list; if the legend or caption is long, then an abbreviated legend or caption is acceptable. Right-justify the page numbers for each figure and table. On the lines bearing page numbers, the space between the last word of the legend or caption and the page number may be left blank or may be occupied by ellipsis points. If ellipsis points are used, then they must be aligned vertically throughout the list. [See note in commentary on Table of Contents, above.] Double-space between entries, but single-space and indent any continuation lines of the same entry.

#### *Preface*

This page is optional (Turabian, 1.25). If this page is included, its title is typed as a first-level heading, centered and all uppercase, approximately 1.5 inches from the top of the page, followed by a triple-space. This page is paginated with lowercase Roman numerals centered and placed 0.75 inch from the bottom of the page.

#### *Acknowledgments* (This is the preferred spelling.)

This page, too, is optional. The title is typed as a first-level heading, centered and all uppercase, approximately 1.5 inches from the top of the page, followed by a triple-space. This section is paginated with Roman numerals centered and placed 0.75 inch from the bottom of the page. This is the place for the author to acknowledge professionally the various sources of direction, assistance, funding, etc., that facilitated the project. See Turabian (1.26) for further clarification of remarks that are appropriate for inclusion. Use complete sentences throughout the acknowledgments.

APPROVED BY FACULTY MENTOR

---

Dr. I. M. Smart, Department of Knowledge

APPROVED BY HONORS THESIS COMMITTEE MEMBER

---

Dr. Noah Tall, Cascade Volcano Observatory

APPROVED BY HONORS PROGRAM DIRECTOR

---

Dr. Andrew A. Piacsek

DATE: \_\_\_\_\_

TITLE OF THESIS IN CAPS  
(CONTINUES HERE, IF NECESSARY)

A Thesis Submitted to the Faculty of  
Central Washington University  
In Partial Fulfillment of the Requirements for the  
Science Honors Research Program

By  
Your Name

Ellensburg, Washington

May 2008