

Guidelines and instructions for papers submitted in Biology 5460

Topic and length

The "5-3-15" guidelines are required for all papers. Your paper is submitted as a PDF and must be

- 5-pages in length (double spaced text and including figures/tables, but not including references)
- Contain 3 figures or tables (included within the 5 pages)
- Include a minimum of 15 fully cited references related to the selected topic and that were cited within the text. Only one or two of these references can be web-page citations. The other citations must come from original, relevant scientific literature.

Title and text of paper

- The text must be an analysis, synthesis, summary, or review of the topic area as described for the specific assignment.
- It is your responsibility to confirm the title and scope of your paper with the instructor or TA.
- You may work in groups of 2-6 for development of the paper concept, figures, and references. However, all writing must be completed individually.

Figures

- Preferably figures should be constructed using a drawing program (e.g., Illustrator, iDraw, Kaleidagraph, Prism).
- Each figure (or photo) must be accompanied by a brief figure legend describing the contents of the figure and identifying the source of the information (if appropriate).
- Scanning figures and then importing them as JPEG files is OK, but please make sure that they are readable once the paper is in PDF format.

Tables

- Each table must be accompanied by a brief table legend describing the contents of the table and identifying the source of the information (if appropriate).
- Scanning tables and then importing them as JPEG files is OK, but please make sure that they are readable once the paper is in PDF format.

References

- All references are presented at the end of the paper and must be in a consistent citation format.
- Many of you will use a literature-bibliographical program (e.g., EndNote, Mendeley, Zotero) for inserting cited papers into the text and bibliography. That is great. I have no preferences.
- While I prefer the citation format used by the journals Ecology or Ecological Applications, you may use any citation format you prefer that completely meets the following criteria:
 - A complete list of authors and the year of the publication are presented.
 - The full title of the article, book, or report is presented.
 - For journal article citations, the complete name of the scientific journal, volume, and all pages are presented; a DOI can also be included but is not required.
 - For books and reports, the complete name of the publisher, city of publication, and page numbers are presented.

If you want advice, here is more guidance on writing style and structure in your paper

1. Please write a nice, solid introduction and add a concluding paragraph or summary. Your reader will appreciate that.
2. An incomprehensible writing style and/or bad sentence structure frustrates those reading your paper. More importantly, your research and critical thinking will be obscured.
3. Do yourself a favor and proofread. Are you satisfied with the product? Was it readable?
4. Ditto for the organization of your paper: it's nice to read an organized, well structured paper that doesn't jump erratically from idea to idea, but rather, flows logically. Use an outline to develop a progressive, logical sequence! They exist for that reason.
5. Organize distinct thoughts/ideas into separate paragraphs. Remember to use a topic sentence.
6. A few spelling errors I can handle, but why when your word-processor has a spell checker?
7. Always, use your own words. Paraphrase - do not transcribe - other people's text. With or without quotations and citations, direct quotes just make the text read choppy.
8. Plagiarism – avoid it! This should be obvious to most people, but make sure you know what plagiarism is, especially since I have provided a separate topic on this topic. Again, always use your own words; it is really easy for us to find if you copied something from the web. If you do not understand plagiarism, GOOGLE the term on the web and take the time to read different presentations that describe the same basic phenomenon. Plagiarism is a violation of the University of Utah Student Conduct Code. (See class guidelines on plagiarism).
9. Do not use colloquial language and do not use abbreviations like “don't” or “isn't”. We are talking about a scientific paper here, not a personal essay or a pop magazine article.
10. Get in touch with your inner 'teen' and check out websites on writing essays. For instance, try <http://www.ipl.org/teen/aplus> and <http://members.tripod.com/lklivingston/essay/>

Information and Content

High scores are given if the TA feels the paper has pulled real substance from sources and put it together in a way that demonstrates an understanding of the topic. Your document should describe how all the details described come together in an explanation. Low grades for content are typically given to papers that do not seem to bring in much literature (often stretching a sentence or two into long paragraphs), give disconnected bits of information not related to a central idea, or contain many factual errors.

1. Ask yourself: Why am I writing about this topic? Why is it interesting to me? Convey the 'why' to the reader.
2. Analyze and think about what you read: what is the literature telling you? What is it NOT telling you? Add your own insight.
3. Develop a thesis, or point of view, which you will support with facts or arguments. This should be apparent from your introduction. The following example tells the reader what the paper is about, and why it's interesting: "This paper will review the ecology and physiology of halophytic species around the Great Salt Lake. Living in some of the most stressful environments, halophytes employ physiological, biochemical and structural adaptations to thrive in extreme edaphic conditions where only a handful of plants are likely to survive." The author will then follow through and lay out the body of your essay accordingly, addressing the specific stresses and the adaptations, the landscape, ecology, physiology, biochemistry and other fascinating tidbits in a nice progression.
4. Always add a concluding or summary paragraph: restate the thesis, discuss some possible implications or wider significance of your topic and add a final statement on the subject.
5. Try to stay within the 5-page limit. Six pages are permissible, but the TA will not look kindly upon 6+ pages. The TA will not read beyond 6 pages.

Figures

1. We require 3 independent figures or tables.
2. Each figure should highlight something interesting in your thesis.
3. The figures should be referred to in the text. The TA will reduce the score for figures that are only decorative and have no obvious relation to the text. The TA will also reduce the score for figures that are of low quality – always scan at the appropriate resolution.
4. Each figure must have its own caption including figure number, description of the data/picture, and a reference. E.g. “Figure 1: Millions of dollars invested in the last 4 years by the US government in the control of invasive species. Source: Smith, 2003”
5. The figure is referred to in the text using the number, e.g. “The economical costs of managing invasive species are increasing every year (Figure 1)”.
6. The figure should not be too big or too small--somewhere in the range of 7 x 10 cm is appropriate. In other words, do not present me with three huge figures and little text, or conversely, postage-stamp sized pictures that the TA cannot read. The TA will deduct points for poor scans, unappealing pictures, and tiny fonts.

References

1. Of the 15 required scientific references, a maximum of 2 can be from websites.
2. If you have to use websites, please use stable websites: e.g., www.noaa.gov, www.co2science.org. Pretty much any .com site is unacceptable.
3. All the references should be cited properly in the text and referenced correctly at the end of the document.
4. For the citation style you can use any acceptable format. Whichever citation approach you use, use it consistently throughout the paper.
5. Also be consistent in the reference style in your list at the end of the paper. A commonly used style is: author(s), year, title of article, source journal, volume, pages.
 - a. Example: Raven J.A. and D. Edwards (2001) Roots: evolutionary origins and biogeochemical significance. *Journal of Experimental Botany* 52: 381-401.

Don't underestimate the instructor or the TAs -- they may check your sources. They may also copy chunks of your text and search the web for the exact same word sequences. This is an easy way to detect plagiarism. Thanks to GOOGLE, it is becoming easier to detect plagiarism.

Overall Impression

1. Did you put in an earnest effort?
2. Is the paper well prepared, easy to read/follow with nice graphics and interesting material?

Possible
points

4	The obvious
1	Is your name on the paper?
1	Is your name on the PDF file title?
1	Was the paper submitted through the CANVAS website?
1	Are there page numbers on each page?
15	Structure
5	Is there a clear introduction that provides background information and an indication of why the study was conducted?
5	How well does the paper provide an an orderly, logical presentation of information?
5	Does the paper contain a brief and informative summary?
48	Content
3	How well does the material presented relate to the assignment theme?
10	How well does the paper provide an informative synthesis related to the chosen topic?
10	Does the text provide sufficient depth and ocnent to inform and educate the reader?
10	Does the text effectively use literature to support claims or statements in the text?
10	Is the writing style clear and easy to follow?
5	Is the paragraph structure appropriate and the sequence logical?
18	Figures or tables
5	Figure 1 or Table 1; is the content appropriate and relevent, is it of adequate quality
1	Figure 1 or Table 1; is there an adequate figure legend or table description?
5	Figure 2 or Table 2; is the content appropriate and relevent, is it of adequate quality
1	Figure 2 or Table 2; is there an adequate figure legend or table description?
5	Figure 3 or Table 3; is the content appropriate and relevent, is it of adequate quality
1	Figure 3 or Table 3; is there an adequate figure legend or table description?
15	Literature
15	Literature cited - requirement is 15 citations; formatted completely and in consistent style at the end of the end of the paper (1 point each)
Submitted late (minus 10 points)	

100 Total points