

GUIDELINES FOR WRITING ASSIGNMENTS
HORT 421/521
Spring, 2008

SUMMARY REPORTS:

Each week of lectures, except for one week of your choosing, you are expected to write a summary of one topic from the preceding week's lectures. Your report should both summarize the topic, presented by one or two lecturers, and discuss its implications for the fruit industry. You are expected to read literature related to the topic and cite at least three outside sources in this assignment. The lecturers may provide literature references with their presentation materials, which you can use as bibliography sources for the assignment. Otherwise, follow the appropriate guidelines for literature searching and writing research papers in the **Term Paper** section.

TERM PAPER:

The term paper in HORT 421 is a form of research paper or essay that involves first, becoming familiar with the works of "experts", and second, comparing their experiences and thoughts on the topic with your own. Through the process of research and writing, your final paper should be an integration of evidence from the "experts" and your own personal insights on the topic. As such, this assignment will allow you both to learn about a new topic in more depth and to discover your own professional relationship to it. Most important, this research paper should not be just a review and summary of the existing body of knowledge on the topic, because this will not test your capacity for critical thinking and integration of knowledge.

Before you even begin research for this assignment, you must choose a topic and have it approved by the instructors. In choosing your topic, you must first understand the assignment (see below) and then know the audience, besides the instructors, for whom you are writing it. For this assignment, you should consider your audience to be college-educated professionals, researchers, teachers, extension educators, and students in the field of fruit crop management. You should also think of yourself as a primary audience, because if you are not interested or motivated by the topic, it will be much more difficult for you to successfully complete this assignment.

There are two main types of research papers, **analytical** and **persuasive**. In the term paper assignment for HORT 421, you will use an **analytical** approach, that is, you will use evidence to analyze aspects of a topic. The **persuasive** approach, which uses evidence to attempt to convince an audience of a particular point of view, is used when writing research proposals. This will be the type of paper written by graduate students for credit in HORT 521 (see below).

In this **analytical** research paper, you first do research to become an expert on the topic, then you analyze the topic by breaking it down into its parts in order to inspect and understand it, and finally you restructure those parts from your perspective so that they make sense to you. During the research stage of this assignment, it is better if you have made no particular conclusions about the topic. Your task during this stage is to survey the available information by critically reading and objectively evaluating it, that is, with a slight degree of skepticism, until the resource convinces you that it is authoritative.

The preliminary research on your topic begins at the library or on a computer, by searching for your topic as "keywords" in a literature bibliography search. In this research you can use indexes to specific journals (e.g. *Acta Horticulturae*, journals of the *American Society for Horticultural Science*, *Journal of Horticultural Science and Biotechnology*, proceedings of state horticultural societies, industry trade magazines, etc.) electronic databases (e.g. *Agricola*, *Biological and Agriculture Index*, *BIOSIS Previews/Biological Abstracts*, *CAB Abstracts*, *First Search*, *WorldCat*, etc.), the Internet (e.g., *Google*), textbooks, etc. Many of these resources are available through the [WSU Libraries](#). It is not acceptable, however, to use only one type of resource in your paper, especially those from the Internet or industry

trade journals, because they are often not peer-reviewed. Textbooks, while they may be good sources for locating articles that have been published on a topic, convey little detailed and current information, and therefore, have limited authority in research papers.

After you complete the preliminary research on your topic, you may need to refine it, either by narrowing or broadening it. Whether you will need to narrow or broaden your topic will depend upon the number and quality of sources you find in your preliminary research or by the popularity of the topic, say in an industry journal such as the *Good Fruit Grower*. It is usually more common to have to narrow a topic than to broaden one, especially if you use one- or two-word “keywords” in your search. Therefore, to narrow topics, add meaningful words that limit the breadth of the one- and two-word keyword searches. Think of the journalist's five Ws (who, what, where, when, and why) to restrict your topic to a more specific kind, quality, place, and/or time. This is where defining a research question can help – a research question transforms your topic into a question, which can be analyzed and a range of answers can be explored. To broaden a topic, look for associations and the context of your topic in the limited resources you find.

The sources or materials that supply information on your topic are your resources. There are two types of sources: **Primary** sources are original research reports or direct sources of information that stand alone, whereas **secondary** sources are ones that interpret **primary** sources, such as, articles that review a topic. Obviously, your term paper will become a **secondary** source, but it should contain both **primary** and **secondary** sources.

After identifying sources through library and/or Internet research, it is time to critically read and evaluate them. This is where you read and question the source, with a degree of skepticism, to sort out good resources from bad. Four important aspects of this critical evaluation of sources include the **structure**, **purpose**, **audience**, and **authors** of the source. To evaluate the **structure** of a book, look at the table of contents, skim the preface or introduction, and glance at diagrams, figures, and tables to see if your research question is addressed. For a journal article, read the abstract for a summary of the article, then read the introduction for background, and finally look at the diagrams, figures, and tables to see if they support the conclusion(s) of the authors. To evaluate the **purpose** of the source, examine the title and research question, or hypothesis statement, and if the author’s affiliation/organization and/or the publisher have a vested interest in one perspective or another. Next, evaluate the **audience** of the source by examining the writing style, use of technical words, and what stake the target audience might have in the topic. Finally, evaluate the **authors** for their credibility by examining what else they have written on the topic, if they have been cited by other sources, and their education, expertise, and position in the scholarly community. While the same evaluation criteria apply to web sites on the Internet, these sources are more challenging to evaluate. Be sure to look beyond the specific web page that contains the information that you seek to see when the web page was written, who are its authors, and what is the sponsoring organization of the web site. Internet sources can be acceptable, as many legitimate reports by governmental agencies and professional and scientific organizations can be found there. If you can answer yes to the following questions, then the source should be a satisfactory resource for you:

1. Is the date of the source current enough to contribute to answering your research question?
2. Is the author a credible source with authority and expertise in your topic?
3. Is the source relevant and thoughtfully and logically presented?

As you critically read the sources of information that you have gathered, you should annotate each source with notes. Be sure to record all of the bibliographic information about the source (i.e. authors, publication date, title of article, volume, page numbers, publisher, etc.), which will be needed if you cite the source in your paper. According to the *Encyclopedia of Library and Information Science*, an annotation "is a succinct explanation or description ... [whose] purpose is to guide the reader to material worth his time,...." The annotated bibliography you prepare for this assignment will be a list of sources annotated with your notes that provide information and evaluation of each source. The annotated bibliography is a research tool that will help you in compiling, reviewing, and synthesizing your sources.

It will also allow the instructors to quickly get a sense of what the source is about, its arguments, and its usefulness in your research paper. To accomplish the objective of this part of the assignment, the annotation for each source should summarize its content, argument, or hypothesis, its methodology and principal results, and its conclusions. Each annotation should also evaluate the source by listing its strengths and weaknesses, and the relevance of its results and conclusions to your research question. Basically, in this evaluation you are asking yourself how relevant the source is to your research question in comparison with other sources on this topic.

The ANNOTATED BIBLIOGRAPHY you submit to the instructors for review should include a minimum of 10 annotated sources, and be formatted as follows:

1. The annotated bibliographies should be arranged alphabetically, starting with the last name of the first (senior) author, then the last name of the second author if the senior author provides more than one article, etc.
2. The first part of the bibliographic entry should contain a citation written in the “name-year” style of the of the *Council of Biological Editors* (see Appendix) – the same citation style that you will use in your paper.
3. The second part of each entry is your annotation, containing the informational and evaluative elements, as described in the previous paragraph.
4. The final part of each annotation should describe how this source will contribute to your paper by answering your research question.

(NB: The research question you posed earlier may evolve as you do the annotated bibliography, so think of your research question as tentative up until the final version of your paper.)

The next step in the writing process is to develop a detailed OUTLINE of your paper. An outline is an organizational plan that outlines your paper all the way from your introduction and research question to your thoughtful summation and conclusion. A detailed outline will help you articulate the main points of the paper, discover structural gaps in it, focus on substance over style, avoid “stream-of-consciousness” writing, and assist in first draft writing. The first step in constructing an outline is to carefully read the notes you took when you first read the literature sources you initially gathered and the more detailed annotations of your most important sources in the annotated bibliography. Look for classifications that relate to your research question. You can prepare this classification of sources on separate pieces of paper, using colored highlighter pens, or on the computer. In the process of outlining, you may find that some sections have strong support from your sources and others are weakly supported. In this case, you may want to try and fit the weak section into a stronger section, or look for more sources to strengthen the weak section. In some instances, you may even need to reevaluate and refine your research question. It is also at this point that you pose a tentative or “working” title for your paper. If your outline is detailed enough, the lowest level sub-section of the outline could serve as the topic for the lead sentence of each paragraph.

The first DRAFT of your paper should follow the detailed outline you have developed and include:

1. the working **title**,
2. an **introduction**,
3. the **body** of the paper, and
4. a **conclusion**.

The **title** need not be a complete sentence, but it should make the paper inviting and convey the main ideas. The **introduction** should begin with a lead statement to capture interest and establish momentum, then follow with broad background statements that encompass the key ideas that will emerge, and conclude with your focused research question, around which the entire paper revolves. In the **body** of your paper you will make use of the sources that you gathered in support of your research question. It should be clear and concise, and provide transitional sentences between ideas. You should support and defend your research question with appropriate examples, while still staying focused so as to advance your main ideas. At the same time, don’t be afraid to look at the issue in new ways. Your paper should

end with a **conclusion**, which briefly summarizes the main points and discusses the implications for the agricultural industry and society. A well-crafted conclusion should re-phrase the main points bringing them into sharper focus, propose new ideas and speculate on the future, present the next logical research question beyond your own, bring closure to your ideas, and leave the reading audience thinking.

It is individual preference whether you initially write the introduction to your first draft, or the body of the paper first and then “bookend” it with the introduction and conclusion. Regardless of the order of your writing, you should proofread and revise your paper two to three times before you turn it in as the draft assignment to the instructors. The things you should look for during proofreading are:

1. Is the title descriptive of the contents of the paper?
2. Is the research question clearly stated?
3. Does the introduction establish the importance of the issue and the context for the research question?
4. Are there clear transitions between the introduction and body of the paper, and the body and the conclusion?
5. Do the paragraphs represent clearly distinctive sections that begin with a topic sentence and end with a sentence that moves back towards abstract, general terms that remind the reader of the main point of the paragraph?
6. Do the paragraphs provide transitions between one another, so that they flow and create unity in the paper, and do they provide a clear connection to the research question?
7. Is the order of paragraphs logical?
8. Are the examples you use in support of your research question reliable, representative, and convincing?
9. Are your sources authoritative, satisfactorily explained, and properly cited?
10. Is the conclusion clear and concise, and will it leave a lasting impression?
11. Is there any part of the paper that is not on the topic, and therefore, not essential and can be eliminated?

Before you submit your draft paper to the instructors, check word choice, sentence structure, use of active verbs, correct verb tense, grammar, punctuation, and spelling. It is always helpful to read your paper aloud and to have a friend read and comment on it.

For more help on this and other writing assignments, see the online workshop on [Writing a Research Paper](#) at Purdue University’s Online Writing Lab (OWL) and the University of Maryland’s library web site on [Preparing an Annotated Bibliography](#). Personal assistance on writing is available at the Writing Centers at [WSU-Pullman](#) (335-7959) and [WSU-TriCities](#) (372-7372). The instructors can also help you with problems you encounter as you write your draft and final versions.

RESEARCH PROPOSAL:

Graduate students enrolled in HORT 521 are expected to write a research proposal addressing the research needs and priorities of a crop or sector of the fruit industry. This proposal may address a specific topic area of the crop (e.g. rootstocks) or a general sector of the fruit industry (e.g. labor).

In this assignment, use a **persuasive** style in which you take a specific stance on an issue that uses evidence from bibliographic sources in support of your stance. The statement of your debatable stance is known as a thesis. The thesis is a one- or two-sentence statement that explicitly states the purpose of your proposal. The thesis statement of the proposal should be placed near the end of the introduction and guide your audience toward the development of your argument. In the thesis statement you should take a specific stance on the topic, which your audience could reasonably disagree with if you didn’t provide them with evidence in support it, that is, with proof. Otherwise, for this assignment, follow the general writing guidelines given for the **Term Paper** above.

LITERATURE CITED

Katz, William A. 1968. Annotation. In: Kent A, Lancour H, editors. Encyclopedia of library and information science. Marcel Dekker, New York, NY.

APPENDIX

The CBE Name-Year System:

When using the name-year system, cited sources are arranged alphabetically in the list of references, with the date of publication immediately following the author's name. Commas are used to separate multiple references. An example of reference entries in the text:

“The discovery in normal cells of genes capable of causing tumors can be considered a milestone in cancer research (Stehelin *et al.* 1976). Recent work (Sarkar *et al.* 1995) has confirmed the importance of this finding. As Bishop and Varmus (1985) point out, numerous results now suggest that changes in these genes transform normal cells into cancerous ones.”

Here's how these reference entries would be formatted in the Literature Cited section:

Bishop JM, Varmus HE. 1985. Functions and origins of retroviral transforming genes. In: Weiss R, Teich N, Varmus HE, Coffin J, editors. RNA tumor viruses. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY. p 999-1019. (*This is a chapter in an edited book.*)

Sarkar T, Zhao W, Sarkar NH. 1995. Expression of *jun* oncogene in rodent and human breast tumors. J Biol 1(1). <<http://www.epress.com/w3jbio/vol1/sarkar/sarkar.html>>. Accessed 1996 23 Oct. (*This is from an online journal web page.*)

Stehelin D, Varmus HE, Bishop JM, Vogt PK. 1976. DNA related to the transforming gene(s) of avian sarcoma viruses is present in normal avian DNA. Nature 260: 170-73. (*This is from a serial scientific journal.*)

Some other example citation formats are:

M.S Thesis and Ph.D. Dissertation

Peck GM. 2004. Orchard productivity and apple fruit quality of organic, conventional, and integrated farm management systems. MS Thesis, Wash. State Univ., Pullman, WA.

Willett MJ. 1995. A knowledge-based system for winter freeze protection of peaches and nectarines in Washington. PhD Dissertation, Wash. State Univ., Pullman, WA.

Extension Bulletin

Mayer DF, Johansen CA, Burgett DM. 1986. Bee pollination of tree fruits. Pacific Northwest Coop. Ext. Bul. PNW 0282.

Meeting Proceedings

Seavert C. 2005. Economics of matching harvest quality with market demands. Proc. 100th Annu. Mtg. Wash. State Hort. Assoc. p 165-168.

Trade Journal

Warner G. 2006. New network seeks funding for virus testing. Good Fruit Grower 57(1): 30-31 (1 Jan.)

Book (non-edited)

Westwood MN. 1993. Temperate-zone pomology. Physiology and culture. 3rd ed. Timber Press, Portland, OR.

The general format for all web site citations is:

Author's name (last name, first and any middle initials). Date of Internet publication. Document title. <URL> or other retrieval information. Date you last accessed it.

rev. 01/02/08