

**Course Information:**

**Type:** Research Paper

**Course Information:** Topics (Biology 108) – Cornell College

**Level:** 100

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**Block Plan Context:**

This course emphasizes the application of biological concepts and theory to humans and their environment. It is recommended for non-science majors. It fulfills the Writing Requirement.

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**Important Features of the Assignment:**

- Distinguishing and analyzing content and characteristics of the same topic in popular media and scholarly press requires use of **primary and secondary sources, integrating and synthesizing, and critical thinking skills.**
- Original analysis **discourages plagiarism.**
- Requiring drafts and revisions emphasize **research and writing as a process** as well as **proper documentation and citations.**
- **Expertise** of librarian, writing consultant and faculty are incorporated.

**Description of Assignment:**

BIO 108 Topics: Gender, Health, and Biology  
Papers: From Science Magazine to Oprah

How do people learn about advances in science, technology, and medicine? The lead article in the Personal Journal section of last week’s Wall Street Journal discussed the use of heart scans in determining the risk for a heart attack. The September 27, 2004, issue of Newsweek is devoted to “The New Science of Mind and Body.” Most of us find out about scientific advances and research from the popular press. You receive an interpretation of primary scientific research through a filter. Is what you read an accurate and objective synopsis of the research? How do determine this? How does a primary research article in the journal Science become a headline or topic of discussion on the Oprah Winfrey Show?

You will write two papers in this course. Each paper will trace an article in the popular press back to the original research paper.

**A. Choosing an article.** What topic in medicine or health interests you? Have you heard or read of a particular advance in medicine that you find intriguing? Your topic must be relevant to this course and must address sex or gender issues and health. I have a file of numerous examples for you to choose from or you may choose your own topic. I must approve your topic for each paper.

## **B. Researching a topic.**

Primary sources: Your article will be based on an original research paper published in a peer-reviewed scientific journal such as *Science*, *Nature*, or the *Journal of the American Medical Association (JAMA)*; this is called a primary paper or source. Find this paper. You may find an article based on a non-peer-reviewed paper. These are usually published by an individual or group advocating a particular treatment or life-style. If you choose an article such as this, you will need to find peer-reviewed articles that either refute or substantiate this paper. Read the Seven Warning Signs of Bogus Science to determine whether or not your article is non-peer-reviewed.

For example, last summer Reuters News, the India Daily, the Inquirer and CNN, to name only a few, all carried the same news flash that carrying a mobile phone in a back pocket could affect a man's fertility by damaging sperm. The articles were based on research presented at a conference of the European Society of Human Reproduction and Embryology. If you chose an article such as this you would need to find the original abstract published in conjunction with the conference. Barring that, you would need to find out other information that relates directly to electromagnetic energy or radiofrequency radiation on humans. Are there any other studies that substantiate or refute this study? A pertinent article might be, "Whole body exposure of rats to microwaves emitted from a cell phone does not affect the testes," published in the journal *Bioelectromagnetics* (vol. 24(3), 2003).

Secondary sources: In order to understand the example above you would need to learn more about cell phones, the kind of frequencies cell phones use, and the effect of this form of energy on living cells. In addition, you need to know more about the testes and sperm production. You will need to search for secondary sources for this more general information. Textbooks, encyclopedias, websites are all secondary sources you may find useful.

Review articles are also considered secondary sources or articles because they synthesize information from primary or other secondary sources. In fact, any article in the press is considered a secondary source. *Natural History Magazine* and *Scientific American* are useful secondary sources.

**C. Writing a paper.** Your paper should include a summary of the original research including why the research was done or the justification for the research, how the research was done or what was involved with the research (number of patients, how data was collected, how the data was analyzed, etc.), and what the authors concluded. You are writing this paper for a general audience such as the other students in this course; be sure to include a discussion of any relevant background necessary to understand the research. You also need to examine how the press or media interpreted this research. Were particular components of the research emphasized over others? Was anything omitted? Do the popular press articles concur with the conclusions of the authors of the research article? Did any of the press articles put a particular "spin" on the research to cater to a specific audience? Finally, you should include your own interpretation of the original research and analysis of the press articles.

**D. Paper format.** Both papers should be double spaced, font 12, Times New Roman, with 1 inch side margins and 0.75 inch top and bottom margins. Literature Cited (references) are not included in the page length. You will need to schedule time in the Writing Studio for assistance

with your papers. You will turn in each paper twice: once as a rough draft and then as a revised final. Each paper must include at least two press articles about the research paper.

**First Paper:** Your first paper is due this Friday. You will be going to the library Tuesday afternoon for assistance in searching your topic. I will provide you with topics and articles for this first paper to get you started. This paper should be at least 3 pages long. A paper less than 3 pages could not adequately cover your topic.

**Second Paper:** This paper should be at least 8 pages long. The second paper must be a different topic from the first paper. Considering the page length, this paper must be more extensive than the first, and you must choose your own topic. I must approve your topic.

**Further Suggestions for Writing**

1. Know your audience! Write your paper at the level of BIO 108. Explain or define terms or phrases that may be unfamiliar to your audience. Always remember: If you had to look it up, your audience probably will not understand it either.
2. Watch that sloppy writing! I am not here to teach you basic grammar and spelling. If you are having difficulty with your writing (usually with organization), consult the writing studio or let me know and I'll help you. I will check your final paper for the following: awkward phrases, spelling errors, evidence for lack of proofreading, inappropriate verb tense, inappropriate subject and verb agreement, problems with punctuation, continuity and structure, unnecessary material, completeness, consistency, coherent paragraphs.
3. Never turn in a first draft! Although I have asked you to submit a draft, it should not be your first draft. Edit, re-write and then I will help you fine tune.
4. Use the stylebooks available in the library.
5. Use an outline to organize your ideas and writing.
6. Be careful of your references. Do not include any references in your Literature Cited section that are not directly cited in the text of your paper. Failure to cite references is considered plagiarism. Use an appropriate and consistent APA citation style

**Timeline:**

<b>Wk</b>	<b><i>Monday</i></b>	<b><i>Tuesday</i></b>	<b><i>Wednesday</i></b>	<b><i>Thursday</i></b>	<b><i>Friday</i></b>	<b><i>Weekend</i></b>
<b>1</b>	Writing in the Sciences Workshop with Writing Consultant	Hands-On Research Session in the Computer Lab with Librarian		Writer's Workshop	Students have individual appointments with Writing Consultant / Paper 1 due	
<b>2</b>			Students have individual appointments with Writing Consultant	Students have individual appointments with Writing Consultant	Paper 2 due	