

## BIO 375/575 Ecology of Infectious Disease Written Assignment

For this assignment, you need to pick an **infectious disease OF HUMANS** (obviously caused by a microorganism) and write a 4-5 page (graduate students – 8-10 pages) review of the disease. Unlike past papers you may have written on infectious diseases, this paper must focus on the **ECOLOGY of the infectious disease**. For example, in the past, it may have been more appropriate to focus on virulence factors and toxins alone whereas this paper may discuss virulence factors and toxins but should discuss them in the context of the ecology of the disease process. Basically, this paper should not be solely concerned with what occurs in humans; the written assignment should also include where the microorganism(s) live in the environment, any other hosts the microorganism(s) utilizes in their lifecycle, and how environmental factors play a role in causing infections in humans. That said, this is not a sociology class and so the focus of the paper should still be the infectious disease and not socio-policies.

For this paper, you will need to obtain **PRIMARY** journal reference articles that will serve as the basis of your written assignment. The best place to obtain such articles is the PubMed website: <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>. This is a query-based website with the freedom to search a variety of keywords and/or topics. For definition purposes, a primary journal article is not a review, a letter to the editor, or news and views type paper. It is published documentation of scholarly research that has been peer-reviewed. For the assignment, you will need to obtain **4 primary** journal articles (graduate students – **7 or more**) and **DISCUSS** the findings of the scholarly research in the context of your paper. Your textbook can be used as one of the sources. The references should be cited properly in the text of the paper either by number or first author last name and the full reference with ALL AUTHORS listed under the references cited section at the end of the paper. Remember, MOST of you wrote papers in BIO205, it is very similar!!!

### Papers will be graded on:

Topic:	4 Points
Content:	20 Points
Spelling/Grammar:	8 Points
References – number and depth	4 Points
References – properly cited	4 Points

The **topic** points will be fully awarded if you pick a disease that is found in humans. The **context** section is a culmination of many things including, but not limited to, explanation of the primary journal article findings you have referenced, detailing the ecology of the disease in humans, and the synergy/flow of the written document. Since EVERYONE has spell-check capabilities, there will be zero tolerance for **spelling** errors. This includes ‘typos’ so it will be very important to proof-read the document before turning it in. **Grammar** (as well as some of the content) will include the ability to write in complete sentences and the proper use of commas, semi-colons and colons. Of note, in recent years, for whatever reason, there has been a HUGE increase in students using semi-colons and colons in scientific writing. In general, this is a POOR scientific writing style and should be limited in your papers. If you choose to utilize these punctuation techniques, use them correctly or points will be deducted. Another part of this is the increase in use of the passive voice in scientific writing. For example, instead of saying, “*Bacillus anthracis* is a Gram positive bacillus that **can** cause disease”, say that it **DOES** cause disease. Other examples of passive voice are phrases like, “is believed to have” or “studies have demonstrated” or “research has shown”, etc., all of these things need to go away FOREVER in scientific writing. Here are some further pitfalls as a list:

- Diseases and organisms should not have animate phrases or adjectives associated with them.
- Sores and signs of infections do not have ‘lifespans’.
- Limit the use of ‘This’ and ‘They’ at the beginning of sentences.
- There should be no quotes in the paper, ideas should be properly referenced.

- Wikipedia IS NOT A SCIENTIFIC REFERENCE engine and should be avoided.
- There should be no “I’s” and “we’s” in your paper.
- These are just some examples of poor scientific writing and should be avoided.

Finally, make sure the **conclusion** at the end of the paper is not a rehash of what has already been said. The conclusion should be a summary of your paper and your findings other than word for word what you have already written. Please do not start this section with, “In summary” or “In conclusion”. We pay great attention to this section as we believe it is the “take home” message and how you feel about the topic.

If you have any questions, please ask Dr. Monroy. We can help you in choosing the topic or its appropriateness; however, we will not ‘proof’ any drafts and will only grade the final assignment. If you need help with scientific writing, you should go to the Learning Assistance Center.

REMEMBER – the paper is due **March 28th** BEFORE CLASS STARTS.