

BIO 175: Infectious Disease Project Guidelines

Purpose:

To become familiar with a variety of infectious diseases by creating a presentation on a selected disease and by reviewing classmates' presentations.

LATE PROJECTS WILL NOT BE ACCEPTED!

Directions:

I. Brief Research & Claim Disease

Infectious diseases are important in all our lives. Conduct a brief search of infectious diseases caused by a pathogenic microorganism. Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, protozoa, helminths, or fungi; the diseases can be spread directly or indirectly, from one person to another. Being sure that there is adequate information on your selected disease, you will create a presentation and act as the class educator of your chosen disease. Diseases will be claimed on a first come-first serve basis through Blackboard's Discussion Board. There will be only one presentation per disease, so please check this discussion board to see what has already been taken.

To make your infectious disease claim:

1. Conduct a brief research on your desired disease ensuring there is sufficient information available to conduct a presentation on.
2. Select your infectious diseases by going to Discussion Board>> Infectious Disease Selection on the course Blackboard site to create a thread.
 - Make sure the subject line includes the disease name
 - Your selection must be approved by your instructor; if it is not approved, your instructor will provide feedback. If you do not get approval, you will receive a "0" for the project.

Research

To learn more about your selected disease, you will perform a search of the literature (scientific journals, books, magazines, news media, and internet), then utilize the information you've gathered to construct a presentation of your disease. Be sure to include all references (in APA format) with at least three (3) being peer-reviewed sources. Your final slide of the PowerPoint presentation should be a Works Cited page with a complete, APA formatted reference for every source you used. Remember to use in-text citations as you borrow from each source in your presentation. For help with references and citations, visit the [Purdue Owl website](#) (opens new window).

To post your citation:

Provide one peer-reviewed academic journal article reference in APA format in Discussion board>> Infectious Disease Reference. This article must be directly relevant to your research topic and will provide the scientific evidence you will use to begin your

investigation. Students will be limited to two (2) attempts to provide an accurate APA formatted peer review article citation.

II. **Report & Present**

Your research findings will be presented via PowerPoint presentation that you will present to the class using Tegrity® software. Presentations should encompass all required content (listed below) and should be approximately 12-15 minutes in length. Be sure to include pictures and talking points, as a slide full of text will lose your audience (and will result in loss of points). For the tech savvy, you may opt to create your presentation utilizing Prezi or other alternative presentation software. Outside videos (i.e. YouTube) may be included or embedded in your presentation, however, may not exceed 2 minutes in length (remember videos are meant to supplement your presentation). Please present required content in order, A-G.

Required Presentation Content:

- A. What is the causative agent of the disease? Is it a bacterium, a virus, a prion, or a eukaryote? Describe in detail its characteristics.**
 - a. If it is a bacterium, what are the characteristics of the cell (Gram-reaction? cell shape and arrangement? metabolic capabilities?).
 - b. If it is a virus, what are its characteristics (DNA, positive-strand RNA, negative-strand RNA, or retrovirus? enveloped or naked? how large is it? does it form a provirus? Any unique characteristics of its multiplication cycle?).
 - c. If it is a prion, what is a prion? Wherein the body does it occur? What is the function of the normal-type protein?
 - d. If it is eukaryote, is it a fungus, an alga, a protozoan, a platyhelminth, or a nematode? Is it multicellular or unicellular? What is its life cycle?
- B. History: How long have we known about this disease?**
 - a. Describe the changes in our knowledge and attitudes toward this disease throughout history.
- C. Epidemiology: Describe the prevalence and transmission of this disease.**
 - a. Where (in the world) is the disease prevalent? How many people are currently infected? What is the rate of new infections? What are the rates of morbidity and mortality?
 - b. What is (are) the reservoir(s) of the pathogen? What is (are) the mode(s) of transmission?
- D. Pathology: Describe the pathogenic effects on cells, tissues, and organ systems.**
 - a. Where in the body (what tissues/organs/cells) does the pathogen affect?

- b. What damage does the pathogen inflict? How is this damage inflicted (is there direct mechanical damage? is a toxin produced? does the immune response cause damage?)?
- c. What is the time sequence of the disease (length of incubation, prodrome, illness, decline, and convalescence)? Are there sequelae?
- d. What are the major signs and symptoms?

E. Response and Treatment

- a. Describe the activity of our immune system against the pathogen.
- b. What types of medical treatments exist? Describe how these treatments affect the progression of the disease.
- c. Describe prophylactic measures that can be taken to limit the risk of infection.

F. Socio-politico-economic

- a. Describe any historic or present day social, economic, or political issues that either help or hinder us in limiting the spread of the disease.

G. Other Interesting Information and images

Your information must be credible, accurate, and well supported by evidence. The best sources of information are the research journals and the books as well as webpages maintained by professional societies and organizations. Searches for articles and academic material should start with the electronic databases of libraries such as [FTCC's Paul H. Thompson Library](#) (opens new window), [PubMed](#) (opens new window) or other such resources.

III. Post & Respond

Lastly, after class presentations have been uploaded to Tegrity®, all students in the course will be able to view them. You will have five (5) days to view a minimum of three (3) videos and post your comments, thoughts, or questions on the Infectious Disease Response Discussion Board. Finally, respond to students post by adding your comments to the post. When evaluating your classmate's presentations be sure to offer questions or responses to what was said. Offer research that backs or refutes a point being made. Be advised that "good job: or "I agree" do not qualify as proficient responses. Your response should add to the body of knowledge in the class. ***You must post to the Discussion Board before you can see other students' posts. To encourage academic honesty, only your first post will be graded as your Initial (Individual) post. You will lose all credit if this post is empty or incomplete.***

- ***DO NOT post a thread soliciting comments, thoughts, or questions.***
- ***DO NOT post your PowerPoint Presentation.***

Grading Criteria: This research project is worth 100 points and weighs 10% of your overall course grade.

- I. **Brief Research & Claim (Discussion Boards 1 & 2)**
 - **5 points** – Infectious Disease Project Selection
 - **5 points** – One properly APA formatted Peer Reviewed Article Citation

- II. **Tegrity® Presentation**
 - **78 points – Research Project Presentation:**
 - i. **65 Points** – Demonstrating thorough knowledge of subject, and effectively covered all required information
 - ii. **13 points** – References of at least **3 peer reviewed scholarly journal**. Use proper APA format. [*PurdueOwl*](#) (*opens new window*) is a great source to help with this. You may use other non-peer reviewed sources in addition to your 3 peer reviewed sources. With appropriate in-text citations.
 - iii. **Deductions** – Formatting. Presentation is Visually Appealing and Eye Catching and NOT so busy that it distracts. Avoid grammatical and spelling errors that distract the audience and will result in loss of points. Consists of a mix of text, images, and other media. Abides by presentation length requirements.

- III. **Post & Respond (Discussion Board 3)**
 - **12 points – Conclusion of Research Project**
 - i. Post well thought out comments, thoughts, or questions to a minimum of three (3) presentations. Be sure to provide sufficient detail when posting comments and always be respectful of other's postings!

- IV. **Self-Assessment Form**
 - **3 bonus points – Detailed analysis of student's performance**