Biology 402: Infectious Disease and Global Public Health

Spring Semester 2020

Tues, Thurs 2-3:15 pm  Genome Science Bldg 1374

(the syllabus will be updated as the semester proceeds so check back occasionally)

Make sure to look for dates when we will discuss book readings and research papers! Reading assignments are from diverse online sources, from *Mountains Beyond Mountains* by Tracy Kidder and from assigned primary research papers--links for these will be found below or on the lecture notes page. Course policies are on the non-Sakai course website.

READINGS NEED TO BE COMPLETED BEFORE THE LECTURE TO WHICH THEY ARE ASSIGNED

Date and Lecture:

Jan 9 An introduction to Global Public Health (MP)

http://www.youtube.com/watch?v=xJpZnUjtorI


Jan 14 A Brief History of Haiti (MP)


Jan 16 Introduction to Tuberculosis/First Book Discussion (MP)  Mountains Beyond Mountains, Part I pp. 1-44

http://www.cdc.gov/tb/topic/basics/default.htm


**Jan 21 The TB bug (MP)**

http://www.mayoclinic.org/diseases-conditions/tuberculosis/basics/definition/con-20021761

(read all the sections on this mayo site on TB)

http://www.nature.com/ng/journal/v45/n10/full/ng.2744.html

**Jan 23 TB treatment, Part 1/First Paper Discussion (MP)**

http://en.wikipedia.org/wiki/Rifampicin

**Jan 28 TB treatment, Part 2 (MP)**

Molecular biology: Antibiotic re-frames decoding (download and read PDF)

**Jan 30 Conjugative DNA transfer and antibiotic resistance (MP)**


**Feb 4 Exam 1 (Material through Jan 30)**

**Feb 6 HIV and AIDS/Second Book Discussion (BD)**

Mountains Beyond Mountains pp. 45-95

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2753265/

**Feb 11 HIV and AIDS continued (BD)**

Mountains Beyond Mountains pp. 96-134
http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(10)70186-9/fulltext


Feb 13 An introduction to retroviruses (BD)

http://www.youtube.com/watch?v=RO8MP3wMvqg


Feb 18 Scientific paper discussion (BD)

https://www.pnas.org/content/early/2019/12/11/1914183116.long

Feb 20 Developing antiretroviral drugs Part 1 (BD)


Feb 25 Developing antiretroviral drugs II (BD)


Feb 27 The economics of treating HIV world-wide and Access to Essential Drugs as part of the fulfillment of the Right to Health (MP)

March 3 Exam 2 (Material Feb 6 through Feb 27)

March 5 Human Rights continued (MP)

Essential Drugs List

http://humanrights.wikia.com/wiki/First_Generation_Human_Rights


March 7-15 Spring Break

March 17 1st set of student posters

March 19 Student posters continued
March 24  How HIV evades the immune response (BD)


https://insights.ovid.com/pubmed?pmid=23786957

March 26  In class paper discussion (MP)

March 31  Student posters continued

April 2  How HIV evades the immune response continued (BD)

April 7  Promise and Challenges of an HIV Vaccine (BD)

https://science.sciencemag.org/content/345/6193/166.long

https://science.sciencemag.org/content/345/6193/169.long

https://science.sciencemag.org/content/345/6193/167.long

April 9  Student posters continued

April 14  Final Student posters

April 16, 21, 23 TBA

Final Monday May 7 Noon = Exam 3
(Covers ALL material after Exam 2)