Syllabus BIOL 062
T TH 11 am-12:15 pm
GSB 1374

Professor Mark Peifer (521 Fordham Hall) 962-2272

NOTE--the syllabus will be updated as the semester proceeds to match the pace of the course and accommodate outside speakers so make sure you check back frequently!!
Also make sure to look for dates when we will discuss the book readings!

Reading assignments are from:
Mountains Beyond Mountains by Tracy Kidder
Reading assignments will also include diverse online source--links for these will be found below or on the lecture notes page.
You should read/view the assignments BEFORE the class to which they are assigned

Date: Lecture:

August 20  Class Intro and An introduction to Global Public Health
http://www.youtube.com/watch?v=xJpZnUjtorI

August 22  A Brief History of Haiti

August 27  Introduction to Tuberculosis/First Book Discussion
Mountains Beyond Mountains, Part I pp. 1-44
http://www.cdc.gov/tb/topic/basics/default.htm
(First three sections (through “Signs and Symptoms”))
(10 facts about TB)

August 30  The TB bug
http://en.wikipedia.org/wiki/Mycobacterium_tuberculosis
(Sections “Microbiology” through “Genome”)

Sept. 3 **TB treatment, Part 1** /Second Book Discussion
http://learn.genetics.utah.edu/content/basics/dna
http://learn.genetics.utah.edu/content/basics/transcribe/ (including activity)
https://www.youtube.com/watch?v=Ikq9AcBcohA&feature=player_detailpage
Mountains Beyond Mountains, pp. 45-95

Sept. 5 **TB treatment, Part 2**
https://www.dnalc.org/resources/3d/central-dogma.html
(Don't worry about section on splicing)
http://www.nature.com/scitable/topicpage/ribosomes-transcription-and-translation-14120660

Sept 10 **Exam (Material through Sept 5)**

Sept 12 **HIV and AIDS**
1. Signs and Symptoms, 2. Transmission, 10. History

Sept 17 **Start planning your future from the start--University Career Services Overview**

Sept 19 **An introduction to retroviruses**
Mountains Beyond Mountains, pp. 95-134
https://www.youtube.com/watch?v=RO8MP3wMvqg

Sept. 24 **Intro to Retroviruses (cont'd)/Third Book Discussion**
http://www.avert.org/about-hiv-aids/how-infects-body
https://www.youtube.com/watch?v=eS1GODinO8w

Sept 26 **Developing antiretroviral drugs Part 1**
Mountains Beyond Mountains, pp. 135-177.
https://www.avert.org/living-with-hiv/starting-treatment
https://www.poz.com/basics/hiv-basics/hiv-life-cycle
https://www.poz.com/drugs/classes/Nucleoside-Nucleotide-Reverse-Transcriptase-Inhibitors

Oct 1 **Developing antiretroviral drugs I continued/Fourth Book Discussion**
https://www.youtube.com/watch?v=XK52oKGekeA
https://www.youtube.com/watch?v=Hrd1kNmqEOs
https://www.youtube.com/watch?v=MK2r8J7SCSg
https://www.youtube.com/watch?v=ni7yKBLsFwc

Oct 3 Case studies [bring your laptops]
http://www.sciencemag.org/content/345/6202/1265.full
http://www.sciencemag.org/content/345/6202/1266.full
http://www.sciencemag.org/content/345/6202/1260.full

Oct. 8 Developing antiretroviral drugs II
http://www.nature.com/scitable/blog/viruses101/hiv_resistant_mutation
http://en.wikipedia.org/wiki/CCR5 (Sections 1+2+5)
http://www.nature.com/news/stem-cell-transplants-may-purge-hiv-1.13297

Oct. 10 The economics of treating HIV world-wide/Fifth Book Discussion
Mountains Beyond Mountains, pp. 179-210
http://www.npr.org/blogs/health/2013/12/30/256885858/-1-000-pill-for-hepatitis-c-spurs-debate-over-drug-prices
http://www.reuters.com/article/2014/09/30/us-france-deficit-gilead-idUSKCN0HP15N20140930
http://www.reuters.com/article/2014/09/30/us-foundation-india-usa-medicines-idUSKCN0HP11520140930

Oct. 15 Access to Essential Drugs as part of the fulfillment of the Right to Health
http://www.who.int/mediacentre/factsheets/fs323/en/
http://apps.who.int/iris/bitstream/10665/93142/1/EML_18_eng.pdf (peruse me for the general concept)

Oct 17 Fall Break

Oct 22 GUEST FROM Partners in Health
READINGS WILL BE ADDED

Oct. 24 How HIV evades the immune response
http://www.historyofvaccines.org/content/articles/human-immune-system-and-infectious-disease
Oct. 29  Exam (Covers Material Sept 12 through Oct 22)

Oct. 31 How HIV evades the immune response (continued)/Sixth Book Discussion
Mountains Beyond Mountains pp. 211-253

Nov 5 Class exercise 2--Reading a paper

Nov 7 Hope and challenges of an HIV vaccine
https://www.vaccines.gov/basics [topic list is at left]
http://www.vaccines.gov/diseases/index.html [peruse examples on chart at left]
http://www.historyofvaccines.org/content/articles/different-types-vaccines

Nov 12 First Student talks

Nov. 14 Student talks continued

Nov 19 Hope and challenges of an HIV vaccine (continued)  Mountains Beyond Mountains pp. 254-end
https://www.niaid.nih.gov/diseases-conditions/empirical-approach

Nov 21 Student talks continued + Seventh Book Discussion

Nov 24 Student talks continued

Nov 26 NO CLASS THANKSGIVING

Dec 6 TBA + Final Book Discussion=Book overall

Exam 3 (Final)  Thursday Dec 12 Noon [I do not choose date or time!]

Course Policies
DIVERSITY STATEMENT: The Department of Biology values the perspectives of individuals from all backgrounds reflecting the diversity of our students. We broadly define diversity to include race, gender
identity, national origin, ethnicity, religion, social class, age, sexual orientation, political background, and physical and learning ability. We strive to make this classroom and this Department an inclusive space for ALL students.

**Grading:** Your final grade will be determined based on your performance on exams, your oral presentation, and your class participation. There will be three exams, with 25% of your grade coming from each of the three exams. 15% of your grade will be determined by the quality of your oral presentation, and 10% of your final grade will depend on course participation (online quizzes, Poll Everywhere questions, asking and answering questions in class and participating in discussion-- note also that while attending class is a very good idea, it alone is NOT participation, and note that the participation grade WILL be ZERO if you do not participate). Each exam will cover primarily the material indicated; however, as you learn basic material it will be reflected in your understanding of more advanced material later on in the course. Grades will not be assigned for individual exams, only points; you will be able to see how you did from a posted distribution of scores after each test--take the time to learn the meaning of mean and median scores! Final grades will be assigned on a curve based on the total number of points for the entire semester-- thus a single poor performance is less likely to adversely affect your grade. Rather your overall standing in the class determines your grade. Exam questions will be taken from lectures and assigned readings. Exams must be taken on the dates indicated during the regular class period; no makeup exams except in special circumstances, i.e., medical or family emergency documented in writing. The makeup test may be an oral exam.

**Grading disputes:** If your exam points were added incorrectly, please see me and I will be happy to make a correction. All other requests for exam re-grading must be in the form of a written appeal to the instructor, justifying why your answer should be accepted. Note that the entire exam may be re-graded. No exam taken in pencil will be re-graded. All appeals for changes must be made within 10 days after the exam is returned to the students.

last updated 08/10/19