

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**

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

Sections on "French Saint-Domingue", "Political Struggles", "United States Occupation", "The Duvalier Era", "The Struggle for Democracy"--years 1986-2004

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"))

<http://www.who.int/features/factfiles/tuberculosis/en/index.html>

(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**

<http://en.wikipedia.org/wiki/HIV/AIDS>

1. Signs and Symptoms, 2. Transmission, 10. History

<https://www.statnews.com/2019/07/16/hiv-genetic-code-extracted-evidence-virus-emergence/>

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-infected-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.un.org/en/documents/udhr/>

<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.merckmanuals.com/home/immune_disorders/biology_of_the_immune_system/acquired_immunity.html

<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

<http://education-portal.com/academy/lesson/acquired-immunity-t-cells-b-cells-and-antibodies.html#lesson>

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.who.int/ebola/drc-2018/faq-vaccine/en/>

<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