

**MCB 55: Plagues and Pandemics 2013**  
**MWF, 9 am-10 am; 3 units; 2040 VLSB**

In this course we will discuss how infectious agents cause disease and impact society at large. We will examine historical and current examples of plagues and pandemics, and consider the question of what we should do to ameliorate the impact of infectious disease in the future. The course is intended for non-majors and will begin by briefly providing necessary background in microbiology and immunology. In the subsequent lectures we will be discussing a particular infectious disease with information about the lifecycle of the pathogen, the immune response, vaccines and treatment as well as the social and historical impact of infectious diseases.

\*\*\*Note: You will not receive credit for this class if you have **PREVIOUSLY taken** MCBC100A-Biophysical Chemistry, MCB102 --Survey of Biochemistry, MCB150 Molecular Immunology, OR MCBC103./PMBC103/PHC102 –Bacterial Pathogenesis. But you may and should take this class before you take the upper division

No laptop computers or tablets (iPads, Samsung tablets) are allowed to be used during class time.

**Instructors:**

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**Office hours**

TBA  
Tuesday 2- 3 pm 176 LSA

**Reader:** Cost: \$30, available at Copy Central 48 Shattuck Sq. (the cross street is University Avenue ---THIS IS NOT the Copy Central on Bancroft). The reader from the past two years will also be fine though the order of the readings has changed.

**Exams (2 Midterms, each worth 20% of the final grade; 1 Final, worth 30% of the final grade)**

Midterm examinations will be given during class time and the final examination will be given at the scheduled time during exam week. Midterms will cover material presented in class and in the readings since the last midterm and up to the date of the midterm. The Final will cover all the material presented in the class and in the readings for the entire course. The Final Exam will be given on **Thursday Dec. 13, 7-10pm**, in a location to be announced. The Exams will all be a mixture of multiple choice, true/false, matching, fill-in-the-chart, and short answer.

**Quizzes (five quizzes, each worth 2% of the final grade)**

During six different lectures, there will be “pop quizzes” on the readings. Five quizzes will count (your worst score will be automatically discarded). There will be no advance warning of these quizzes and no makeups. The purpose is to encourage you to read the readings and attend the lectures.

**“One pagers” (two assignments, each worth 10% of the final grade)**

There will be two take-home writing assignments, each limited to a single page of single-spaced 12-point text. The objective of these assignments is to provide you a chance to express your thoughts in response to a reading or controversial topic raised in class in a longer and more detailed format than is possible with in class midterms.

**Grading**

Midterm I	100pts	20%
Midterm II	100pts	20%
“One pagers”	2 x 50 pts	20%
Quizzes on readings	5 x 10pts	10%
Final Exam	150pts	30%
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	500pts	100%

The assignment of letter grades at the end of the semester is “curved”. We typically aim for a median grade of a B-, with roughly 1/3rd of the class earning grades in the A-range, 1/3rd in the B-range, and 1/3rd in the C-range. This is not set in stone and if the classes overall performance is exemplary, we will not object to handing out more As.

**Academic Integrity and UC Berkeley Honor Code.** Cheating and Plagiarism are unacceptable behavior and if you are caught will result in a failing grade for the class. The student community at UC Berkeley has adopted the following Honor Code. <http://asuc.org/honorcode/> "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." The hope and expectation is that you will adhere to this code. If you are uncertain what constitutes cheating or plagiarism, go to <http://campuslife.berkeley.edu/conduct/integrity> for more info.

<b>MCB 55 Plagues &amp; Pandemics: Class Lecture Schedule 2013</b>				
	9:10-10 am	2040 VLSB		
<b>Section</b>	<b>Intro and historically important pathogens</b>			
Fri	8/30	1	Class Overview	Diamond: Guns, Germs & Steel: Ch. 11; Beatty
Mon	9/2		<b>NO CLASS - LABOR DAY</b>	
Wed	9/4	2	Microbe Hunters 1	de Kruif: Microbe hunters, Ch. 1, 3 Vance
Fri	9/6	3	Microbe Hunters 2	de Kruif: Microbe hunters, Ch. 4 Vance
Mon	9/9	4	Basic Microbiology	Vance
Wed	9/11	5	Innate Immunity	Beatty
Fri	9/13	6	Adaptive Immunity	Angier: The Canon, Ch.7 Beatty
Mon	9/16	7	Vaccines	Beatty
Wed	9/18	8	Smallpox 1	Preston: The Demon in the Freezer, pp.29-98 Beatty
Fri	9/20	9	Smallpox 2	Beatty
Mon	9/23	10	Plague	Bollet: Plagues & Poxes, Ch.1 Vance
Wed	9/25	11	Cholera	Bollet: Ch.6 Vance
Fri	9/27	12	Legionnaires	Vance
Mon	9/30		REVIEW SESSION	Beatty/
Wed	10/2		<b>Midterm I (on Section 1 only)</b>	
<b>Section 2</b>	<b>Emerging diseases/pathogens</b>			
Fri	10/4	13	Emerging Infection Zoonose	National Geographic Article "Deadly Contact" Beatty
Mon	10/7	14	SARS	Beatty
Wed	10/9	15	Rotavirus	Scientific American "New Hope Defeating Rota Beatty
Fri	10/11	16	Norovirus	Beatty
Mon	10/14	17	Lyme Disease/Hantavirus	<b>ONE-Page assignment DUE</b> Beatty
Wed	10/16	18	Ebola	Karlen: Man and Microbes Ch. 10 Beatty
Fri	10/18	19	Dengue	<b>Green</b>
Mon	10/21	20	Dengue	<b>Green</b>
Wed	10/23	21	Toxic Shock Syndrome	Garrett: The Coming Plague, Ch.12 Vance
Fri	10/25	22	Antibiotic resistance: MRSA,	Gawande: Complications, The Case of the Red Vance
Mon	10/28	23	Hepatitis C Virus	Beatty
Wed	10/30		REVIEW SESSION	Beatty
Fri	11/1		<b>Midterm II (on Section 2 only)</b>	
<b>Section 3</b>	<b>Current worldwide pathogens</b>			
Mon	11/4	24	Malaria	The Mosquito Killer, The New Yorker 2001 Beatty
Wed	11/6	25	Malaria	Beatty
Fri	11/8	26	Influenza	Drexler: Secret Agents, Ch.5 Beatty
Mon	11/11		<b>NO CLASS VETERAN'S DAY</b>	
Wed	11/13	27	Influenza	Beatty
Fri	11/15	28	Swine Flu H1N1-2009/H7N2	Beatty
Mon	11/18	29	HIV -AIDS	<b>ONE-Page assignment DUE</b> Vance
Wed	11/20	30	HIV -AIDS	Vance
Fri	11/22	31	Tuberculosis 1	Reichman: Timebomb, Ch.1,2 Vance
Mon	11/25	32	Tuberculosis 2	Reichman: Timebomb, Ch.11 Vance
Wed	11/27		<b>NO CLASS</b>	
Fri	11/29		<b>Thanksgiving- NO CLASS</b>	
Mon	12/2	33	Parasites	Beatty
Wed	12/4	34	Parasites	de Kruif: Microbe hunters, Ch. 9 Beatty
Fri	12/6	35	Review	Beatty
Fri	12/13		REVIEW SESSION	2040 VLSB 9-10 am
Thurs	12/19		<b>FINAL EXAM (Cumulative) Location TBA, 7-10pm</b>	