Biology 132A: General Microbiology
Tues Thurs 2:00 PM-3:20 PM Block N Gerzenstang 121

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Office hours: by appointment Tues Thurs 1-2 PM

August
Thurs 30 A short history of microbiology; microbiological techniques

September
Tues 4 Evolution of microorganisms
Thurs 6 BRANDEIS MONDAY NO CLASS
Tues 11 NO CLASS
Thurs 13 Bacterial cell structure and function
Tues 18 Microbial growth: an overview
Thurs 19 NO CLASS
Tues 25 BRANDEIS MONDAY NO CLASS
Thurs 27 QUIZ 1. Microbial metabolism I: energy conversion

October
Tues 2 Microbial metabolism II: biosynthesis
Thurs 4 Metabolic diversity: environmental microbiology
Tues 9 The genome of prokaryotes; plasmids; genetic variation
Thurs 11 QUIZ 2. Bacterial motility, development and differentiation
Tues 16 The archaea
Thurs 18 Eukaryotic microbes I
Tues 23 Eukaryotic microbes II
Thurs 25 Viruses
Tues 30 Microbial interactions with other microbes, plants and animals, the human microbiome

November
Thurs 1 QUIZ 3. Molecular basis of pathogenesis: toxins, surface properties, genetic variation
PIECK PAPER TOPIC
Tues 6 Immunological response to microbial infection: innate immunity
Thurs 8 OUTLINE DUE, Immunological response to microbial infection: acquired immunity
Tues 13 Anti-microbial therapy, drug resistance
Tues 15 QUIZ 4
Tues 20 Epidemiology
Thurs 22 NO CLASS
Tues 27 Student group presentations
Thurs 29 Student group presentations

December
Tues 4 Student group presentations
Thurs 6 Student group presentations
Tues 11 Student group presentations
Thurs 13 FINAL PAPER DUE at 9:30 AM
The learning goal of this course is to have a deeper understanding of the following core concepts as they relate to microorganisms: evolution, cell structure and function, metabolic pathways, information flow and genetics, microbial systems and the impact of microorganisms on the environment (including the environment of the human body) and on technology.

Success in this 4 credit hour course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class (readings, papers, discussion sections, preparation for exams, etc.). There is no textbook required for the course, although you might find one in the list below helpful for background reading. Because there is no textbook, it is important to attend the lectures and to do the assigned reading posted on Latte.

Participation in preclass discussion through the Latte site is required and will account for 10% of the grade.

There were be 4 quizzes held on Thursdays: combined they will be 50% of final grade. These quizzes will cover material presented in class and from assigned reading.

Research paper 4-5 pages 20% of grade: Thurs December 13 9:30 AM. Pick topic by November 1. (I will provide some potential topics or students may develop their own topic). Outline with references due November 8 or earlier. Schedule personal appointment with Dr. Lovett during the week of November 12-16.

The last 5 lectures will consist of topics developed and discussed by the class. Participation in this phase of the course will account for 20% of the final grade. Based on your interests, I will assign groups of 3 students to a particular topic.

If you are a student who needs academic accommodations because of a documented disability, please contact me and present your letter of accommodation as soon as possible. I am happy to make the appropriate accommodation.

Recommended Supplementary Texts: Prescott Microbiology McGraw Hill (current edition is 10, you can buy edition 9 for about $20 used on Amazon); Microbe II (2nd edition) ASM Press