**Syllabus for Microbiology and Global Public Health (Micr 3012) Spring 2015**

**Class times: 1-2:50 PM Monday**

**Professor:**

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Office hours: T and Th from 1:30- 3PM and by request.

**Text and required materials:**

**Required text:** *Forgotten Diseases, Forgotten People,* 2nd ed. (2013) by Peter Hotez and *Case Studies in Global Health: Millions Saved* by Ruth Levine (2007)

**Recommended resource:** Chapters 76-86 from *Medical Microbiology* by Patrick Murray et al. (7th ed., 2013).

**Online resources** will need to be accessed from the class page and from internet sites (such as www.who.int and [www.cdc.gov](http://www.cdc.gov)) and articles from scientific journals including *The New England Journal of Medicine*’s recent series on Global Health.

**Course description:** Microbiology and Global Public Health: This course will focus on microbial diseases that are major causes of morbidity and mortality worldwide (e.g. HIV, tuberculosis, malaria, influenza, diarrheal disease and respiratory diseases etc.), diseases that are classified as emerging diseases (e.g. Ebola) and diseases that are being eliminated or eradicated, including certain Neglected Tropical Diseases. This course will analyze the pathogenesis, life cycles, epidemiology and societal impacts of these diseases, while emphasizing preventative interventions such as vaccinations, water and sewage treatment, and elimination and eradication strategies. The role of various agencies (e.g. WHO and CDC) in improving global health will also be discussed. Prerequisites: Micr 1113, Micr 1153 or Micr 2054 or permission of the instructor. (Two one hour lectures per week.)

**Grade:**

**Two hundred points can be earned for this course. These points can be earned from tests, case studies and other assignments**. The tests and written assignments will be based on lecture, discussion, readings, videos, student presentations, and case studies etc. Details of the assignments and tests will be given later in the course, but the class format will be focused on active learning including group learning, problem solving, case studies and discussion-based exercises.

**Percent/letter grades:**

93-100%=A 73-76 % =C

90-92% =A- 70-72% =C-

87-89% =B+ 67-69% =D+

83-86% =B 63-66% =D

80-82% =B- 60-62% =D-

77-79% =C+ 59% or less=E

See the WSU catalog for other information on grading.

**Ethics and responsibility:** Cheating in any form will not be tolerated. If a student is caught cheating, the student will receive an E for the course and will be reported to the administration.

**Attendance:** Your attendance is linked to your performance in the course. Therefore, I encourage you to attend lectures.

**Help for the Students:** Study questions/ learning objectives for various chapters/lectures will be given. These will not be collected but rather are to help you study. If you have any questions about the course or any other concern, please try to see me during my office hours. If your schedule won’t permit that, I will be glad to schedule another time when we can meet based on our schedules. **If you have a question that may be answered briefly in written form, please utilize my e-mail as this may speed up the reply time.**

Any student requiring accommodations or services due to a disability must contact **Services for Students with Disabilities (SSD**) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary.

**Classroom conduct:** Your conduct in class greatly impacts both your own and others’ ability to learn. For instance,

imagine how distracting it is to a classroom when a teacher or another student is trying to explain something and there is a continual, almost daily conversation going on among several students. The University has allowed me as your professor to inform you about sanctions that will be administered. Note the following excerpts from the WSU Student Code of Conduct :

Students have the right to “inquire and be informed by instructors of sanctions they may impose in the different courses they teach for the basic types of inappropriate behavior and academic dishonesty”......

“As members of the Weber State University community, students shall avoid conduct which violates the provisions of paragraph IV.B. above. **Examples of such prohibited conduct include but are not limited to the following:” .......**

**...“6. Obstructing or disrupting teaching, research, administration, disciplinary procedures, computing services, other University-sponsored activities, services, or events, including public service functions;”** .......

Thus, as your instructor I am informing you of what will happen to you if you persist in distracting the class to the point that it is interfering with the other students’ learning:

1. The first time someone exhibits disruptive or distracting behavior, they will be politely asked to discontinue that activity. A record will be made of the infraction.

2. The next time, ten points will be removed from the next test score. A record will be made of the infraction.

3. The third time this occurs, the student will be penalized 50 points from the next test score.

A record will be made of the infraction.

4. The fourth time more serious disciplinary measures at a University level will be pursued.

**For more information, you should read the WSU Student Code of Conduct.**

**Important dates**

Jan. 20 No school (MLK Holiday)

Jan. 27 Cancellation deadline

Feb. 17 No school (Pres. Day)

Feb. 18 Withdraw deadline

March 10-14 No school (Spring break)

Apr. 23 Last Test (Thurs. at 1:00PM-2:50 PM)

**Tentative Class Schedule**

Week 1 Introduction to Infectious Diseases and Global Public Health

Why should we care about Global Public Health?

Public Health Agencies

Indicators of Public Health

Week 2 Determinants of Health

Communicable and non-communicable diseases in Public Health

Introduction to Infectious Diseases of Global Concern

Culture and Public Health

Week 3 Microbial Pathogenesis

Basic Epidemiology and Infectious Disease Transmission

Basics of Immunology and Vaccinology

Week 4 Introduction to microbial disease elimination and eradication strategies

Smallpox Eradication

Case Study

**Week 5 Test/Assignment 1 (50 points)\***

Week 6 Polio elimination and eradication efforts

Control Strategies for vaccine preventable diseases

Case Study

Week 7 HIV

Control Strategies

Case Study

Week 8 Tuberculosis

Control Strategies

Case Study

Week 9 Malaria

Control Strategies

Case Study

**Week 10 Test/Assignment 2 (50 points)\***

Week 11 Diarrheal and Respiratory Diseases of Importance to Global Health

Control Strategies

Case Studies

Week 12 Influenza including avian flu

Control Strategies

Introduction to Neglected Tropical Diseases elimination efforts

Week 13 Neglected Tropical Diseases elimination efforts

Guinea Worm Elimination Control strategies and Case study

Onchocerciasis Elimination Control strategies and Case study

Week 14 Nutrition and infectious diseases

Introduction to emerging infectious diseases

Week 15 Emerging Infectious Diseases (e.g. Ebola) as Global Public Health Problems

Role of Global Public Health Agencies in Disaster Relief and Outbreak Control

**Finals week April 21 Thurs. (1PM -2:50 PM) Test 3 (50 points)\***

**\***Each of these **three lecture based tests is worth 50 points, for a total of 150 points.**

Another **50 points** can be earned based on the case studies, group learning and other assignments due throughout the semester.