

## SPRING 2013 BIOL 233 Microbial Survey Course Syllabus

### **INSTRUCTOR INFORMATION:** Dr. Sabrina Mueller-Spitz

Office: Halsey 151 Phone: 424-1104 Email: muellesr@uwosh.edu

Office hours: Wednesday 12:40-3:00 pm and Friday 10-11 am

Other times are available by appointment.

### **REQUIRED MATERIALS:**

**TEXTBOOK:** Cowen's Microbiology Fundamentals A Clinical Approach. 2013. McGraw-Hill. Over the semester, we will go through a majority of the chapters. During lecture, I will utilize images from the textbook to emphasize key concepts. If you are headed into the medical fields, this is a book you should KEEP as reference.

**LAB MATERIALS:** The course lab manual, Bensen's Microbiological Applications Lab Manual, is sold in the bookstore, required. The chalk talk notes are posted on D2L and is used like a road-map for the laboratory portion of the course.

**ANY OTHER MATERIALS:** Additional lecture or lab items and web links for the laboratory or lecture portion of the course will be posted to D2L content for your convenience.

### **COURSE OBJECTIVES:**

1. To introduce students how the microbial world is intertwined/linked with humans.
2. To detail common structural and functional aspects of microorganisms that are important to their growth and survival.
3. To introduce the large amount of diversity among microorganisms (MOs).
4. To explain how the human microbiome is important in maintaining health and how it has changed our view both chronic and infectious disease.
5. To gain an understanding of how microorganisms cause disease and mechanisms for control.

**LECTURE CONTENT:** Lecture slides will be posted on the D2L content page. Print these materials before class and take notes in your own words on the corresponding slides. I will post key points, terms, and textbook figures/tables that will summarize each lecture topic.

**EFFECTIVE STUDING HABITS:** Come to class and take notes. Don't wait to study until the night before an exam! Allow for enough time to adequately review the material and apply the key concepts from each lecture. Focus on **understanding the key concepts** rather than simply memorizing everything. **In microbiology, there will be new vocabulary and names of microbes that must be learned.** Take time after each lecture to review the lecture points, key figures, and terms. Look for the elements that tie together the different topics. Ask questions during lecture, office hours, or by email if something is unclear. Come to office hours and exam review sessions to maximize your understanding and learning of microbiology. The content in microbiology builds upon previously learned material, so make sure you don't forget the material that previously taught.

## **COURSE ASSESSEMENT:**

### **1. Homework Assignments on Connect (100 points)**

There will be **10 assignments** to help you learn and review the material presented in lecture. The assignments will be set-up on McGraw Hill's Connect, which I have designed specifically for this course. If you purchased a new book, the book will come with the connect code. If you did not purchase a new book, you can purchase access to connect separately. I will grade your completion of the assignments four times during in the semester after each exam.

### **2. Epidemiology Assignment (10 points)**

To learn more about how we understand the spread of disease, you will play Outbreak at Watersedge. After walking through the activities of the public health professionals to solve an outbreak, you will answer a series of questions that will be set-up on D2L's quiz function. This will be an open note assignment. More details will be given later in the semester. Due April 17.

### **4. In-class Questions (10 points)**

Over the course of the semester, I will use some in-class questions to assess your application of the course material. These will occur randomly over the 14-week semester. You are unable to make up these points if you miss the lectures where I ask questions of the class.

### **3. Exams**

There will be four lecture exams during regular class time as follows:

- Friday February 22
- Wednesday March 13
- Friday April 12
- Wednesday May 8

Questions will be taken from material presented in lecture. The material of this is class comprehensive and will successively build on each other, which will be reflected in the exams. Each exam will be in a multiple-choice format. If you miss an exam for any reason, you need to contact me ASAP by Email explaining why you missed the exam. Then I will sign you up for a COMPREHENSIVE make-up exam. It will be held on May 10 in the lecture hall at normal class time. This is an option that you may use ONLY once. All other missed exams will earn you a zero.

### **Course Point Breakdown:**

<b><u>Course Assessment</u></b>	<b><u>Value (Points)</u></b>
Exam 1	100
Exam 2	100
Exam 3	100
Exam 4	110
On-line quizzes (10 Total)	100
Epidemiology Assignment	10
In-class Questions	10
Lab (point breakdown described in lab syllabus)	420
<b>Course Point Total</b>	<b>950</b>

Grading Scheme		
Letter Grade	%	Point Total
A	92.0-100	>874
A-	90.0-91.9	855-873
B+	88-89.9	836-854
B	82.0-87.9	779-835
B-	80.0-81.9	760-778
C+	78.0-79.9	741-759
C	72.0-77.9	684-740
C-	70.0-71.9	665-683
D+	68.0-69.9	646-664
D	62.0-67.9	589-645
D-	60.0-61.9	570-588
F (Failure)	<60.0	<569

**EMAIL COMMUNICATION and D2L** will be used frequently throughout the semester to communicate between Instructors and Students. Emails constitute legal, official University communication. Not checking your email or reading the news items, important dates on the course D2L page is not an excuse for performance problems in the class. Contact Academic Computing for assistance with email and D2L. All email messages pertaining to this class **NEED** to include Biol 233 in the subject line, which will help expedite a response. The professor will **ONLY** respond to polite and detailed emails.

**SPECIAL NEEDS & ACCOMMODATIONS:** Students needing special accommodations or special services should inform the Instructor by showing a copy of their Accommodation Recommendation (AR) and providing an accommodation form (found on D2L) at the beginning of the course. You need to contact Dr. Mueller-Spitz **least one week** before the exam to ensure proper accommodations are taken. Please inform your lab instructor separately.

**ACADEMIC HONESTY:** Academic dishonesty is clearly defined in Chapter 14.01 in UW System Student Code of Conduct. Any violation of Student Code of Conduct will be dealt with on an individual basis according to the severity of the misconduct.

**BEHAVIOR IN LECTURE:** Lecture is held in large lecture hall and in order for everyone to hear the instructor and be able to ask questions: here are some rules that must be followed.

- All electronic devices must be turned off or be silenced during class. This makes a more positive learning atmosphere for the other students.
- As a courtesy to your professor and fellow classmates, please do not chat during the lecture. Voices in large lecture rooms tend to carry great distances and can drown out the voice of the instructor.
- Do not pack-up early. It creates noise that prevents others from hearing the instructor, and you may miss important information.

**Lecture Schedule (Tentative)** The Instructor reserves the right to change order of topics. The speed of the class maybe faster or slower than listed below depending on questions from the class. **EXAM QUIZ dates WILL NOT CHANGE!**

Wk	Class Dates	Topic(s)	Lecture Readings (Chapter & Section)
PART 1: The Nuts & Bolts of Microbes			
1	Jan 28/30 Feb 1	Introduction to Microbiology Chemistry of Life Techniques used for Visualization	Ch 1: 1.1,1.3,1.5,1.6 Ch 2: 2.2-2.3
2	Feb 4/6/8	Prokaryotic Cells Culturing Bacteria	Ch 3: 3.1-3,4 Ch 2: 2.1
3	Feb 11/13/15	Eukaryotic Cells & Other Agents	Ch 4: 4.1,4.3-4.5 Ch 5: 5.1-5.4
PART 2: The Inner Working of Microbes & Their Interaction with the Environment			
4	Feb 18/20/22	Bacterial Growth, Metabolism <b>EXAM 1 -- FEBRUARY 22<sup>st</sup></b>	Ch 6: 6.1-6.3
5	Feb 25/26 Mar 1	Bacterial Physiology, & Genetics Microbial Control	Ch 7 Ch 8:8.1 & 8.5 Ch 9: 9.1-9.3
6	March 4/6/8	Bacterial Diversity and Ecology	Ch 22 Supplemental Readings
PART 3: The Human Environment & Protection from Disease			
7	March 11/13/15	<b>EXAM 2 -- MARCH 13<sup>th</sup></b> Human Microbiome	Supplemental Readings Ch 11: 11.1
Spring Break March 17 <sup>th</sup> -24 <sup>th</sup>			
8	March 25/27/29	Human Microbiome Immune Response	Supplemental Readings Ch 12
9	April 1/3/5	Immune Response Antimicrobials & Vaccines	Ch 13: 13.1-13.6 Ch 10
10	April 8/10/12	Epidemiology <b>EXAM 3-- APRIL 12<sup>th</sup></b>	Ch 11: 11.2-11.3
PART 4: Understanding Infectious Disease			
11	April 15/17/19	Basics of Infection Infectious Disease by Body System	Ch 11: 11.2 Ch 16
12	April 22/24/26		Ch 17 Ch 18
13	April 29 May 1/3		Ch 19 Ch 20
14	May 6/8/10	<b>EXAM 4 --MAY 8<sup>th</sup></b>	Ch 21

Evening review sessions will be held before each exam on the following dates: Feb 20 or 21<sup>th</sup>, March 11 or 12<sup>th</sup>, April 9 or 10<sup>th</sup>, and May 6 or 7<sup>th</sup>. Time and location for each review are to be determined.