**GENERAL MICROBIOLOGY**

**BIO 308**

**Spring 2015**

Class 1:00-1:50 MWF BS 107 Text: Microbiology; Principles and Exploration - 8th Edition, ed Jacquelyn G. Black- **CLICKERS ARE REQUIRED**

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**General Microbiology:** Fundamental concepts of microbiology. The physiology, genetics, molecular biology of microorganisms, and their roles in nature and in infection and immunity will be studied. Prereq: BIO 150, 151, 152, and 153 (or equivalent courses); CHE 230; and BIO

315 or BIO 304.

Office Hours: By appointment (I will meet with you when ever you need help). I also am available, barring an unforeseen happening, after each lecture and I will respond in a timely manner to all e-mail questions.

**A significant amount of the lecture material will be taken from current articles in journals, newspapers, and magazines and therefore will not be in the text, consequently, class attendance is highly recommended.** **In addition, approximately 15% of the material given in lecture will be enrichment and therefore not be in the notes or text. Examination questions derived from the enrichment discussions may not be in the notes. That translates to 4-5 questions on each exam that are lecture specific (not explicitly presented on the PowerPoint slides-most information is an elaboration of slide material ).**

**Three examinations will be given: two hourlies and one final examination**. **Although each examination will only cover the lecture material for that segment of the course you are responsible for the relevant material covered in earlier lectures (that is, some of the material in later chapters depends on material in earlier chapters).**

If you miss an examination, contact me (before the exam, if possible) in accordance with University Senate rules to arrange for a make‑up examination. Make‑up examinations will be permitted only for "excused absences".

***All makeups will be given during the Friday(May 1st) of the final week of classes (i.e. Dead week).* You need to remind me that you are taking a make-up.**

***The Format for make‑up examinations will be one or a combination of the following: multiple choice, fill in the blanks, matching, verbal or essay.***

**Makeup exams will be given on Friday May 1 during class time**

**The following is the schedule of examinations:**

**Examination 1: February 18th BS 107**

**Examination 2: March 25th BS 107**

**Final Exam 3: May 6th, 2015 1pm Room THM 107**

**Evaluation**

Exams including the final (3 total) 3 x 100= 300 points

Highest of the above exams = 100 points

**Participation (clicker questions) 25 points**

**425 points possible (the tests and your “clicker” points will be divided by 4.25 to arrive at your course grade average. I will curve that grade to get the final grade. I cannot tell what the curve will be until I have all of the grades**

A students final course grade (i.e., average of three test scores adjusted to a curve) of no more than 100‑90 = A; 89‑80 = B; 79‑70 = C; 69‑60 = D; <60 = E.

**Participation:** Each class session, you will answer one or more “clicker” questions. Clicker questions will be used to determine your participation grade. You will receive credit if you submit an answer. Your

answer does not have to be correct to earn participation points. You can earn up to 25 points from clicker

questions, but at least 37 points will be offered. There is no way to make up participation points if you

miss class or if you forget your clicker or if your clicker is malfunctioning for any reason; however,

you can miss up to 20% of participation points (excused or unexcused) and still earn full credit for

participation in this course.

Individuals that miss an examination will be given a zero unless they have an official excuse. Individuals who will miss an examination because of an official school function (members of the band, debate team, and religious holiday) should contact the instructor immediately before the examination date in order to schedule a make‑up. Those missing an examination because of illness should contact the instructor immediately after the examination date or as soon as possible to schedule a make‑up examination.

**Lecture Schedule #**

Topics Reading

Scope and History of Microbiology Chapter 1

Microscopy and Staining\*\* Chapter 3

Characteristics of Prokaryotic and Eukaryotic Cells Chapter 4

Growth and Culturing of Bacteria\*\* Chapter 6

Microbial Genetics Chapter 7

Recombinant DNA and Genetic Engineering Chapter 8

Viruses Chapter 10

Antimicrobial Therapy Chapter 13

Host-Microbe Relationships and disease Processes Chapter 14

Epidemiology and Nosocomial Infections Chapter 15

Nonspecific Host Defenses and Host Systems Chapter 16

Immunology I: Basic Principles and Specific Immunity Chapter 17

and Immunization

Immunology II: Immunological Disorders and Tests Chapter 18

Diseases of the Skin and Eyes; Wound bites Chapter 19

Urogenital and Sexually Transmitted Diseases Chapter 20

Diseases of the Respiratory System Chapter 21

Oral and Gastrointestinal Diseases Chapter 22

Cardiovascular, Lymphatic, and Systemic Diseases Chapter 23

Diseases of the Nervous System Chapter 24

Environmental Microbiology \*\*\* Chapter 25

Essential Concepts of Metabolism\*\*\*\* Chapter 5

An Introduction to Taxonomy: The Bacteria \*\*\* Chapter 9

Sterilization and Disinfection \*\*\* Chapter 12

Fundamentals of Chemistry\* Chapter 2

**#**- I cannot give accurate dates for each lecture topic because I cannot assess how much news

will be covered per period. I typically get the articles 1 or a few days before lecture and if there

is a lot of interesting material it will require more lecture time. The above represents the order

in which I will present lecture material.

\* Part of this chapter will not be covered in lecture as it is material that you should have covered prior to this course. I will not test you on the specifics of the parts of the chapter not covered in class but I expect that you know the material as relates to the part of the chapter that is covered in this course.

\*\* Most of this chapter will be presented in the laboratory BIO309-I will only present material

essential to a very basic understanding of how we identify bacteria.

\*\*\* If time permits (it typically does not permit).

\*\*\*\* Most of this material will be covered in other courses and so I will try not to repeat. I will only include material unique to prokaryotic organisms. You will, however, be expected to review material referred to in this course and covered in pre-requisite courses.