BIOLOGY 211 Fundamentals of Microbiology

Instructor Information

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Phone: I am not available by phone; please do not leave messages

Whenever communicating with me by email, please write Bio211 in the subject line; occasionally your messages are sorted into my email Junk Mail box; I routinely go in to look for messages, but having Bio211 in the subject allows me to make that process easier and makes it more likely I will catch your messages in time.

Office Hours: Thursday 11- noon or by appointment

To schedule an appointment outside office hours, please contact me before or after class, or in the interim period between the two lecture hours. Alternatively, email me and write "Bio211" in the subject line.

Course Description:

Biology 211 (Fundamentals of Microbiology lecture) is a 2-unit lecture course that introduces students to the fundamental aspects of microbiology, with an emphasis on the interactions between microbes and humans. The lecture topics include microbial diversity, cell structure and function, physiology, the basics of microbial genetics and reproduction, the basics of how microbes cause disease, and host-parasite relationships. This course is designed for nursing, physical therapy, and food and nutrition majors. It is inappropriate for microbiology majors.

Basic techniques and procedures used by microbiologists are covered in Biology 211L, which can be taken concurrently or after Biology 211.

Prerequisites: Bio203 and 203L, or Bio100 and Bio212; Chem 100, 102, o3 130. Note that if you do not have the pre-requisites, you will be dropped from the course.

Required Materials:

Tortora, Funke and Case, *Microbiology: an Introduction. 9th Edition* (earlier editions may be used but the pagination may differ and some material may not be present).

Course Objectives:

Once you complete this course, you should have an understanding of:

1. The importance of microorganisms to our global society (students are invited and encouraged to bring relevant news articles to class for discussion).
2. The structure and function of cells, their metabolism, how they grow and divide.
3. The tools and techniques that are used to classify and identify microbes as well as those used in biotechnology to develop products.

4. Beneficial and detrimental host-microbe interactions.
5. The role of the immune system in the host response when challenged by microbes.
6. The contributions that microbes make to the environment and society in terms of geochemical cycling, remediation and food production.

Blackboard (Bb) Website: located at https://blackboard.sdsu.edu/webapps/login
Your user name is your RedID number and password to enter the site.

Studying for the course.
1. Take good notes, and compare your notes with those of others. 75% of the exam will come from lecture materials, with the remainder from the text book or associated materials. If you miss a class, get the notes from someone else. Check on Blackboard to make sure you have all the latest updates of the lecture notes.
2. Make sure you keep up with the reading. I will let you know if we skip textbook material that you will not be responsible for.
3. Form study groups - I find that these are helpful, particularly in clearing up confusion and with memorization of terms (you can quiz each other).
4. Use the objectives from each chapter as guidelines for studying. I will be using these when I write the lectures and the exams.
5. Use the CD that comes with the textbook. Take the chapter tests/quizzes that come with each chapter. You might occasionally see questions from the CD on your tests.
6. Take the test at the end of the chapters in the textbook; some of these questions might appear on your exams.

Exams: There will be four exams, each worth 50-65 points; I will drop the one with the lowest grade. You will need a green 882 or 882ES form for each exam.

Make-up exams.
There will be **NO** make-up exams, for **ANY** reason, good or bad. There will be four exams, and I will drop the one with the lowest grade. If you miss an exam, the "0" for this exam will be your lowest grade.

Other points: Throughout the course there will be other assignments that will total up to 30 points. *In addition*, there will be occasional opportunities to earn extra credit. These will sometimes involve on-line quizzes and/or in-class questions.

******** To allow this to occur easily in such a large class, you should bring a **green 882 or 882ES Test form to EVERY class** (every Friday meeting). I will not have extras, and I will not allow turning in answers on other forms because it takes too long to record the answers.

Special Accommodations
Please see me if you have a verifiable disability so that I can accommodate your needs. (For the lab, discuss the matter with your TA.)

Academic Honesty
Students are expected to be honest and ethical at all times in their quest of academic goals. There is "zero tolerance" for academic dishonesty. This includes:
• Unauthorized assistance on an examination, quiz, or any other test.
• Plagiarism (to take and pass off as one's own work the work or ideas of another).
• Any unauthorized access of an instructor's account;
• Any other serious violation of academic integrity identified by the instructor.

If there is evidence of cheating on any test, quiz, report, etc, those involved will receive no credit on the item. The lecture and appropriate lab instructors will meet with those involved and students will not be allowed to sit together during subsequent exams, quizzes (lecture and lab). Further departmental action may be taken, including action resulting in the expulsion of the student who has committed the infraction.

The **Grading Scale** will be as follows:

Grade	% Total Points
A	93-100
A-	90 - 92.9
B+	87 - 89.9
B	83 - 86.9
B-	80 - 82.9
C+	77 - 79.9
C	73 - 76.9
C-	70 - 72.9
D	60 - 69.9
F	< 60

For scores with decimal points ending above 0.5, the point score will be rounded up to the nearest integer; for scores with decimal points ending below 0.5, I will round down to the nearest integer.

Attendance:
Attendance will not be taken in the lecture; however, there will be random opportunities to gain points during lectures, in effect acting as an incentive to attend the lecture. In addition, please remember that 75% of the exam materials will be from lecture notes.

Etiquette for emails and face - to – face discussions.
The faculty and staff associated with Bio 210 are your advocates and want you to succeed in this course. You have every right to ask to review an issue with the appropriate faculty or staff. It is NOT acceptable to write inflammatory emails or use expletives in face-to face meetings. An individual who displays disruptive behavior will be asked to leave the class and further departmental action may be taken.

Tentative Lecture Schedule

Week	Date	Lecture Topics	Chapter
1	Sept 4	Administrative Topics/ Introduction to Microbiology	1
2	Sept 11	Microscopy/Cell Structure & Function	3 & 4
3	Sept 18	Chemical Principles/Metabolism & Microbial Growth	2 (pp 34-50)
4	Sept 25, 2009	**EXAM I**; Microbial Growth & Metabolism, continued	5 & 6
5	Oct 2, 2009	Control of Microbial Growth	7
6	Oct 9, 2009	Bacteriophages (bacterial viruses) & Viruses	13
7	Oct 16, 2009	Viruses	13
8	Oct 23, 2009	**EXAM II;** Principles of Disease & Epidemiology	14
9	Oct 30, 2009	Microbial Mechanisms of Pathogenicity	15
10	Nov 6, 2009	Innate & Adaptive Immunity	16 & 17
11	Nov 13, 2009	Immunity, cont'd; fungi	17
12	Nov 20, 2009	**EXAM III;** Applied Immunology (& antibodies as drugs)	18
13	Nov 27, 2009	Thanksgiving Holiday	
14	Dec 4, 2009	Genetics	8
15	Dec 11, 2009	Biotechnology & Microbial ecology	9
	Dec 14, 2009	**EXAM IV - at 10:30 am**	exam