

**Pima Community College**  
**East Campus**  
**8181 E. Irvington Road**  
**BIO 205 Microbiology**  
**Course Syllabus CRN 10342**  
**Fall 2009**

**Instructor:** Sandy Bejarano  
**Office:** Building O-1 Room 152  
**Phone:** 206-7882  
**Office hours:** M/W 9:15am to 9:45am and 1 to 3pm  
**E-mail:** Sandra.Bejarano@pima.edu

**Class Schedule:** BIO 205 Microbiology / TTh/ 1:00 pm - 3:40 pm / E7 - 708  
Required Text: Microbiology: A Systems Approach by Cowan and Talaro  
BIO 205 Microbiology Manual, 8<sup>th</sup> Edition

**Class Format:** The time spent in-class will include laboratory activities, group work and discussion/lecture.

**Prerequisites:** BIO 156 or BIO 181 or appropriate score on college placement exam.

**Course Description:** Study of microorganisms and their relationship to health, ecology, and related fields. Includes classification, metabolism, microbial control, and immunity. Also includes as overview of viruses and pathogenic fungi.

**Course Objectives:**

1. Demonstrate communication and critical thinking skills.
2. Discuss selected microorganisms and the important role they play in the environment of humans.
3. Prepare specimens for direct microscopic examination, including properly performing the Gram staining procedure.
4. Transfer and culture microorganisms using proper techniques.
5. Separate mixtures of microbes and perform various biochemical tests used to differentiate pathogens from nonpathogens.
6. Apply the principles underlying methods of sterilization, disinfection, and chemotherapy.
7. Discuss pathogenicity factors of microorganisms.
8. Discuss specific and nonspecific defense mechanisms of the body and how they protect the body from disease.
9. Describe mechanisms of immediate and delayed hypersensitivity and clinical applications of each.

**Grading Policy:**

Exams	250
Disease Presentation	35
Disease Presentation	15
Class participation	100
Lab – Identify Unknown	50

The final grade for the course will be determined by the percentage of total points earned by each student. 90% to 100% = A, 80% to 89% = B, 70% to 79% = C, 60% to 69% = D, 0% to 59% = F. For a student to receive a grade of an “I” or Incomplete, at least 75% of the requirements for the course must be met. Additionally, the student must meet with the instructor to discuss this option. The last day to withdraw from the class is **November 13**. If a student fails to attend class, or fails to withdraw from the course, the student will be issued the grade earned based on the number of points possible for the course.

**Exams:** Five exams are administered in class prior to the laboratory activity. They cover material from lecture, assignments, lab, and reading assignments. Exams may include a variety of types of questions (true/false/ multiple choice, short answer, fill in the blanks, essay questions). There is no opportunity to make-up an exam unless I am notified about your conflict in advance.

**Lectures:** Lecture materials are on the MyPima site for the course. You may either print the lectures or use them on-line. Lecture materials will be reviewed in-class. Each student is required to bring the text to each class to work on group activities.

**Attendance:** To pass the course you must be in attendance 85% of the time. For this class, it means you can only miss 4 classes or be late/leave early 8 times. Attendance does play a role in your grade. Not meeting the 85% attendance rule may result in a grade of an F.

**Participation:** Class participation comprises 100 points of your final grade. To receive full credit you must show up on time, stay the duration of the class, participate in the group and laboratory activities and turn in required paperwork. **Labs: Student must wear “closed” shoes and have your hair tied back to be allowed to participate in laboratory activities**, and follow guidelines in order to receive full participation credit for the class. The guidelines are as follows: personal safety to include wearing closed shoes, use of hair ties, no eating or drinking, appropriate use and storage of equipment and following laboratory procedures. Fifty percent of your participation points/day is deducted for violation of any of the above items.

**Disease Presentation:** Disease topics are presented as student presentations. The 15 point activity is a group presentation and the 35 point activity is a solo presentation. Description of these requirements is on the MyPima Site for the course.

**Plagiarism/Ethics:** If plagiarism is suspected, you will be called in to discuss your work with your instructor. Any student using the direct words of others (be they students or some source) will be penalized with a zero for that assignment. Additionally, students are required to follow “The Student Code of Conduct”.

**Safety procedures:** All labs require strict safety procedures to be followed. I will explain all safety procedures before each lab. There’s one big rule in the lab, never pour anything down the drains and do not throw sharps in the garbage can. There are disposal containers for everything. Any student wearing improper shoes may not participate in laboratory activities and will lose all lab participation points for the day.

### **Classroom Conduct**

I expect you to turn off or silence all pagers, cell phone etc. while in the classroom. (no texting)

You are college level students and I expect you to show up on time and complete your work.

Keep copies of graded materials in case of a grade dispute.

Because of insurance limitations, non-registered visitors are not allowed at class sessions.

Possession of drugs, alcohol or firearms on college property is illegal

Eating, smoking, drinking, and soliciting are not allowed in classrooms

Pets are not allowed in the classroom

Students creating disturbances that interfere with the conduct of the class or the learning of other will be asked to leave.

**As an instructor, I have a strong commitment to a safe, structured educational environment. Any student displaying discourteous, argumentative, disruptive, or disorderly conduct will be asked to cease. Further unwelcome conduct by the student will call for the student to be asked to leave the class. This may lead to further action by the instructor including, but not limited to calling campus police, calling 911, filing a code of conduct report, and/or meeting with the Division Dean of Student Development.**

“If you have a disability that requires special accommodations, you are strongly urged to notify me at the beginning of the term so that reasonable accommodations can be made in a timely manner.”

# Lecture Schedule

## Topic

Introduction  
Main Themes of Microbiology  
Chemistry of Biology  
Tools of the Laboratory  
Overview of Prokaryotic and Eukaryotic Cells  
Lab topics  
**September 15**                      **Exam 1**

Algae  
Fungi  
Protozoa  
Helminths  
Viruses  
Bacteria  
Lab topics  
Disease Presentations (Group)  
**October 1**                      **Exam 2**

Nonspecific Defenses  
Immunity  
Principles of Disease  
Mechanisms of Pathogenicity  
Lab topics  
**November 3**                      **Exam 3**

Microbial Metabolism  
Physical and Chemical Control of Microbes  
Microbial Genetics  
Lab topics  
**November 24**                      **Exam 4**

Disease Presentations (Solo)  
**December 15**                      **Exam 5**

**This syllabus is subject to change without prior notice or discussion.**

## BIO 205 Grade Calculation

<i>Entry</i>	<i>Total Points</i>	<i>Points Earned</i>
<b><i>Exams</i></b>		
1	50	_____
2	50	_____
3	50	_____
4	50	_____
5	50	_____
<b><i>Participation</i></b>		
Group Work and Lab Activities	100	_____
<b><i>Assignments</i></b>		
Disease Presentation (Group)	15	_____
Disease Presentation (Solo)	35	_____
<b><i>Lab Identify Unknown</i></b>	50	_____
<b><u>Total</u></b>	450	_____