

Samuel David, Ph.D.  
Tel: (760) 355-6298  
Office: Room 2772  
E-mail: sam.david@imperial.edu

Imperial Valley College  
Spring 2014

**Biology 220 (CRN# 20235)**  
**General Microbiology**

**Course Description:** A comprehensive one semester General Microbiology course that provides students with fundamental concepts of structure and physiology of disease- and non-disease producing microorganisms with particular emphasis on bacteria. Includes basic techniques for culturing, staining and identifying microorganisms. The course meets the requirements for general education, nursing and other higher level biology courses.

Lecture : MW: 8:35-11-45am  
Lab: Thr/Fri: 8:35-11:45  
Room : 2712

**Add/Drop/Withdrawal dates:** Students are responsible for meeting these deadlines.

**Attendance and Tardy policy:** Class attendance and tardy policy follows the regulations as in the IVC catalog. It is appreciated if advance notice of absence can be given. Please make every effort to be on time for the lecture and the lab. If you have more than THREE absences/tardies you may be asked to drop the class at the Instructor's discretion.

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DPS & S) office as soon as possible.

**PLEASE NO FOOD OR DRINKS IN THE CLASSROOM AND THE LAB.**

**PLEASE TURN OFF YOUR CELLPHONES/iPhones IN CLASS AS A COURTESY TO YOUR CLASSMATES AND THE INSTRUCTOR. ( If you are on call please notify me).**

**Grading Scale:**    A=90-100%  
                              B= 89-80%  
                              C= 79-70%  
                              D= 69-60%  
                              F= Below 60%

**Grading Policy:**

**Exams (500Points):**

There will be FIVE exams during the course, each worth 100 points. There will be NO MAKE-UP EXAMS.

**Final Exam (100 Points):** The final exam must be taken as scheduled to receive a passing grade. In case of illness or other valid excuse for which there is a written documentation, please notify me as soon as possible so that I can make suitable arrangements.

Quizzes will be given on any day/anytime the class meets.

Points you earn in the exams, quizzes, class/lab assignments graded by the Instructor will contribute towards your overall grade in the class for the semester. **STUDENTS ARE ABSOLUTELY RESPONSIBLE FOR KEEPING TRACK OF THEIR ACADEMIC PROGRESS DURING THE COURSE.**

**Classroom door will be locked five minutes after the class starts. So Please be on time for the lecture and the lab.**

Attendance is required. Roll will be taken at the beginning/ end of the class. Students are expected to be in the class until the class is dismissed by the Instructor. **If you have been marked absent, your assignment for that day will not be graded.**

## **Student Learning Outcomes:**

**Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:**

- 1. Accurately explain the basic principles of microbiology, which include but are not limited to: structure and functions of prokaryotic and eukaryotic cells, microbial metabolism, bacterial/molecular genetics, pathogenesis, virology and immunology. (ILO1; ILO2)**
- 2. Devise a dichotomous key to aid in the identification of disease-causing bacteria and accurately identify disease-causing bacteria by using the key and experimental techniques. (ILO1; ILO2)**
- 3. Perform experimental techniques in microbiology correctly to test hypothesis, determine characteristics of microbes and perform diagnostics. (ILO2)**
- 4. Apply lecture and laboratory concepts with critical thinking to explain experimental data and scenarios in microbiology not addressed directly in class/laboratory. (ILO1; ILO2)**
- 5. Fully participate in classroom and laboratory activities. (ILO3)**

WK	DAY	DATE	LECTURE	LABORATORY	MATERIALS NEEDED
<b>1</b>	Tue	1-21	Intro; Chapter 1		
	Thr	1-23	Chapter 2	Ex.2-1;3-1	
	Fri	1-24		Ex.1-4;1-5; 3-4;	
<b>2</b>	Tue	1-28	Chapter 2		
	Thr	1-30	Chapter 3	Ex. 3-6	
	Fri	1-31		Ex. 3-8	
<b>3</b>	Tue	2-4	<b>Exam 1</b>		
	Thr	2-6	Chapter 4	Ex. 3-9	
	Fri	2-7		Ex. 3-7	
<b>4</b>	Tue	2-11	Chapter 4		
	Thr	2-13	Chapter 5	Ex. 4-3; 4-5	<b>Gram Stain Test</b>
	Fri	2-14	HOLIDAY		
<b>5</b>	Tue	2-18	HOLIDAY		
	Thr	2-20	Chapter 6	Ex. 4-4	
	Fri	2-21		Ex. 5-2;5-3;5-4	
<b>6</b>	Tue	2-25	<b>Exam 2</b>		
	Thr	2-27	Chapter 7	Ex. 5-5;	
	Fri	2-28		Ex. 5-7	<b>Minor Unknown Distributed</b>
<b>7</b>	Tue	3-4	Chapter 8		
	Thr	3-6	Chapter 9	Ex. 5-10	
	Fri	3-7		Ex. 5-11; 5-13; 5-14	
<b>8</b>	Tue	3-11	<b>Exam 3</b>		
	Thr	3-13	Chapter 10	Minor Unknown	
	Fri	3-14		Minor Unknown	
<b>9</b>	Tue	3-18	Chapter 11		
	Thr	3-20	Chapter 12	Minor Unknown	
	Fri	3-21		Minor Unknown	<b>Minor Unknown Report Due</b>
<b>10</b>	Tue	3-25	Chapter 13		

	Thr	3-27	Chapter 14	Ex. 5-12	
	Fri	3-28		Ex.5-18	<b>Major Unknown Distributed</b>
<b>11</b>	Tue	4-1	Chapter 15		
	Thr	4-3	Chapter 16	Ex. 7-2	
	Fri	4-4		<b>Exam-4</b>	
<b>12</b>	Tue	4-8	Chapter 17		
	Thr	4-10	Chapter 18		
	Fri	4-11	Chapter 21	Major Unknown	
<b>13</b>	Tue	4-15	<b>Exam 5</b>		
	Thr	4-17	Chapter 22	Chapter 22	
	Fri	4-18		Major Unknown	
<b>14</b>	Tue	4-22	HOLIDAY		
	Thr	4-24	HOLIDAY		
	Fri	4-25	HOLIDAY		
<b>15</b>	Tue	4-29	Chapter 23		
	Thr	5-1	Chapter 23	Chapter 23	
	Fri	5-2		Major Unknown	
<b>16</b>	Tue	5-6	Chapter 24	Chapter 24	
	Thr	5-8	Chapter 25	Chapter 25	
	Fri	5-9	TBA		<b>Major Unknown Report Due</b>
<b>17</b>	Tue	5-13			
	Thr	5-15			
	Fri	5-16			

**Required Text: Microbiology, An Introduction; Tortora, Funke and Case (11<sup>th</sup> Edition)**

**Lab Manual: Microbiology, Laboratory, Theory and Application; Michael Laboefte and Burton Pierce (Brief Edition)**