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Imperial Valley College  
Summer 2013

**Biology 220 (CRN# 30012)**  
**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 : M-F: 0730-0940am  
Lab: M-F: 1000- 1210; 1230-0240  
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/tardy 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 (300Points):**

There will be **THREE** 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 periodically at the beginning of the class. If you are late, you cannot take the quiz.

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.**

**Extra credit may be given during the course at the Instructor's discretion and students should not take it as an entitlement.**

**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)**

BIOL 220 : CRN# 30012  
 ROOM : 2712  
 David

Summer 2013  
 Mon-Fri Instructor: S.  
 0730-0940; 1000-1210;1230-0240pm

DATE	LECTURE	LAB
5/20	Introduction; Ch.1	Lab Check-in Environmental sampling
5/21	Ch.2 Chemistry	Simple Stain Aseptic Transfer Aerotolerance
5/22	CH..3 Microscopy	Gram Stain Capsule Stain
5/23	Ch. 4 Cells	Endospore Stain Acid-fast stain
5/24	<b>EXAM 1</b>	Gram Stain Test
5/27	<b>HOLIDAY</b>	
5/28	Ch. 5 Microbial Metabolism Ch.6	Mannitol Salt Agar Eosin Methylene Blue Agar <b>Minor Unknown Distributed</b>
5/29	Ch. 7	MacConkey's Agar Work on Minor Unknown
5/30	Ch.8 Bacterial genetics	Phenol Red Broth MR-VP Catalase Test
5/31	<b>EXAM 2</b>	Simmons Citrate Agar Work on Minor Unknown
6/3	Ch. 9 Recombinant DNA Technology Ch. 10 Classification	Bile-Esculin Test Decarboxylase and Deaminase Test
6/4	Ch. 11 Prokaryotic Survey	Casease test Gelatinase test Starch Hydrolysis
6/5	Ch. 12 Eukaryotic Survey Ch. 13 Viral Survey	<b>Minor Unknown Report Due</b> <b>Major Unknown Distributed</b>
6/6	Ch. 14 Disease	Urease Test
6/7	<b>EXAM 3</b> Ch. 15 Pathogenesis	SIM Medium Kligler Iron Agar

	Ch. 16 Non-Specific Immunity	Coagulase Test
6/10	Ch. 17 Immunity Ch. 18 Immunity (Continued)	Antimicrobial Susceptibility (Kirby-Bauer Method) Nitrate Test
6/11	Ch. 19 Immune Disorders Ch. 20 Antimicrobial Drugs	
6/12		
6/13	Ch. 21 Microbial Diseases of the skin and Eyes	
6/14	Ch. 21 Microbial Diseases of the skin and Eyes	
6/15	Ch. 22 Microbial Diseases of the Nervous System	
6/16	Ch. 23 Microbial Diseases of the Cardiovascular and Lymphatic System	
6/17	Ch. 24 Microbial Diseases of the Respiratory System	<b>Major Report Due</b>
6/18	Ch. 25- 28	
6/19	Finals	

Required Text: Microbiology, An Introduction, Gerard Tortora , Funke, B.R. Case,C. (11th Edition)

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