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Imperial Valley College
Summer 2014

Biology 220 (CRN# 30034)
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-Th: 0830-1040am
Lab: M-Th: 1100--0110; 0130--0340
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# 30034 Summer 2014
ROOM : 2712 Mon-Th Instructor: S. David
0830-0940; 1000-1210;1230-0240pm

DATE	LECTURE	LAB
6-16	Introduction; Ch.1	Lab Check-in Environmental sampling
6-17	Ch.2 Chemistry; Ch.3 Microscopy	Simple Stain Aseptic Transfer Aerotolerance
6-18	Ch.4 Cells	Gram Stain Capsule Stain
6-19	EXAM 1	Endospore Stain Acid-fast stain
6-23	Ch. 5 Microbial Metabolism	
6-24	Ch. 6 Microbial Growth	Mannitol Salt Agar Eosin Methylene Blue Agar Minor Unknown Distributed
6-25	Ch. 7 Control of Microbial Growth	MacConkey's Agar Work on Minor Unknown
6-26	EXAM 2	Phenol Red Broth MR-VP Catalase Test
6/30	Ch. 8 Bacterial Genetics	Bile-Esculin Test Decarboxylase and Deaminase Test
7-1	Ch. 9 Recombinant DNA Technology	Casease test Gelatinase test Starch Hydrolysis
7-2	Ch. 12 Eukaryotic Survey	Minor Unknown Report Due Major Unknown Distributed
7-3	Ch. 13 Viral Survey	Urease Test
7-7	EXAM 3	Antimicrobial Susceptibility (Kirby-

	Ch. 14 Disease	Bauer Method)
7-8	Ch. 14 Disease	
7-9	Ch.15 Pathogenesis	
7-10	Ch. 16 Non-Specific Immunity	
7-14	EXAM 4	
7-15	Ch. 21 Microbial Diseases of the Skin and Eyes	
7-16	Ch. 21 (Continued); Ch. 22	**Major Report Due**
7-17	Ch. 22 Diseases of the Nervous System	
7-21	Ch. 23 Microbial Diseases of the Cardiovascular and Lymphatic Systems	
7-22	Ch. 23 (Continued)	
7-23	FINAL EXAM	

Reqired Text: MIcribiology, An Introduction, Gerard Tortora , Funke, B.R. Case,C. (11th Edition; Digital Version) ISBN # 9780321802699

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