

BIOL 205 GENERAL MICROBIOLOGY
SPRING 2017 SYLLABUS
SAN DIEGO MIRAMAR COLLEGE

PROFESSORS: Dr. Ana Dowey
Mrs. Crista Wagner

Contact Information

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SCHEDULE

3.00 Lecture Hours and 6.00 Lab Hours per week – 5.00 Units

Lecture: Monday and Wednesday. 1:15 PM to 02:55 PM. **Room:** MIRA S6-214

Lab: Monday and Wednesday. 03:15 PM to 05:55 PM. **Room:** MIRA S6-214

Office hours: Monday and Wednesday 10:30 A.M. to 11:30 A.M. **Room:** S6-115G

IMPORTANT NOTE

The course will be taught by two professors. Dr. Ana Dowey will be teaching from the week of 01/30/2017 through the week of 04/03/2017. Even though, I will not be teaching the remaining semester weeks, I will be available to you to answer any questions you may have.

Professor Crista Wagner will be teaching the remaining of the semester from the week of 04/10 through the last week of the semester. This syllabus includes both schedules.

We have coordinated both schedules, lecture and lab, to provide you with a smooth transition.

PREREQUISITES

BIOL 107, and CHEM 100, and CHEM 100L, or CHEM 152, and CHEM 152L, each with a grade of "C" or better, or equivalent.

DESCRIPTION

BIOL 205 General Microbiology This introductory course covers fundamental aspects of microbiology including taxonomy, structure, physiology, reproduction, genetics, control, immunology, diversity, and host-symbiont relationships. Lab work emphasizes basic techniques for culturing, staining, counting, and identifying microorganisms. This course is intended for students pursuing careers in allied health fields and may meet entry requirements for these allied health fields. Associate Degree Credit & transfer to CSU. CSU General Education. IGETC. UC Transfer Course List.

IMPORTANT ACADEMIC DEADLINES

Add: 02-10-2017

Drop with Refund: 02-10-2017

Drop without "W": 02-10-2017

Withdrawal: 04-14-2017

Pass/No Pass: GRADE ONLY

It is your responsibility to drop off the class, which you are no longer attending. I will withdraw any student after the add/drop deadline (02/05/2017) due to excessive absences. Students who remain enrolled beyond the withdrawal date will receive an evaluative letter grade in this class.

COURSE OBJECTIVES, STUDENT LEARNING OUTCOMES, AND EXPECTATIONS

Critical thinking and application: Student will be able to properly utilize and analyze results of common physiological, biochemical, medical and immunological assays and present these results to identify unknown bacteria.

TEXT AND SUPPLIES

TEXTBOOK: MICROBIOLOGY / TORTORA. Edition: 12. Publisher: PEARSON EDUCATION. ISBN: 0-321-92915-2
MICROBIOLOGY: -W MSTR MICOBIO (HB) PKG / TORTORA. Edition: 12. Publisher: PEARSON EDUCATION
ISBN: 978-0-321-92892-4

LAB MANUAL: BIOL 205/230 Lab manual is available at the **Mira Mesa Copy Center.**

SUPPLIES: Full length white laboratory coat

Inoculating loop

Inoculating needle

Microscope glass slides

Bibulous paper

Microscope lens paper or wipes.

ATTENDANCE AND TARDINESS

Students are expected to attend every lecture and lab sessions. BIO205 is an intensive, fast pace course. EACH absence will set you behind and more importantly, you will not have the opportunity to acquire the lab skills necessary to succeed in the class. I realize, situations beyond your control may arise which could interfere with your attendance. Therefore, it is your responsibility to arrange with classmates to keep you up-to-date on the day's topics.

Remember Lab activities and practical exams will not be repeated for you. The final grade in this class will be affected by active participation and attendance in lecture and lab at the end of the term, as follows: 15 bonus points will be granted to students who have perfect attendance (lecture and lab) during the term taught by Dr. Ana Dowey. A total of 5 points from these 15 bonus points will be deducted for each absence or tardiness.

CLASSROOM BEHAVIOR AND STUDENT CODE OF CONDUCT

You are expected to attend lecture and Lab. sessions regularly. The course is a high pace one and there is no extra time to go over prior lectures and labs. It is understandable that occasionally there is an emergency, which could keep you from attending school. In such a case, you must contact me as soon as possible mainly if there is an exam scheduled that day. Exams will not be rescheduled if there is not a valid excuse. Each missed session will result in a 5-point deduction. There will be no make-up exams except with prior approval. Such makeup exams will be more rigorous than normally scheduled exams. Dates Scheduled for exams and lectures are subject occasional changes depending on time available.

Students are expected to respect and obey standards of student conduct while in class and on the campus. The student Code of Conduct, disciplinary procedure, and student due process (Policy 3100, 3100.1 and 3100.2) can be found in the current college catalog in the section Academic Information and Regulations pages 39-51, and at the Office of the Dean of Student Affairs (H-500). Charges of misconduct and disciplinary sanctions may be imposed

upon students who violate these standards of conduct or provisions of college regulations. As your instructor, I have the following expectations of your behavior in this class:

- Promote a courteous learning atmosphere by exhibiting mutual respect and consideration of the feelings, ideas, and contributions of others.
- Demonstrate respect for your work, as well as the work of others, by recognizing and acknowledging strengths and improvements.
- Demonstrate respect for tools, equipment and supplies in the classroom.
- Practice consideration for others by maintaining a clean and orderly learning environment.
- Recognize everyone's opportunity to contribute information in a relevant and meaningful manner by not monopolizing discussions, interrupting, interjecting irrelevant, illogical or inappropriate questions or comments.
- No food and beverages in the class are allowed!
- You are allowed to carry your personal: cell phone; however, **it must be set in the vibration mode.**

This class will be conducted in accordance the college student code of conduct and basic standards of academic honesty. Cheating, plagiarism or other forms of academic dishonesty are not acceptable and will not be tolerated. Violations of standards of academic honesty will be reported to the school dean for appropriate action.

DRESS CODE

Safety regulations dealing with laboratory dress code will be enforced, so please keep them in mind every day you attend class and lab. Failure to do so will result in the student being excused from the classroom for the day.

No open-toe shoes allowed.

No drinking or eating in lab.

No applying cosmetics

ACCOMMODATION OF DISABILITY

Students with disabilities who may need academic accommodations should notify their professor immediately. Please be aware that under the Disability Act, if have special needs, we are prepared to help you. Do not hesitate to talk to me in private to discuss your circumstances. Please do not wait too long.

EVALUATION

A letter grade will be assigned based on the accumulated total points earned during the semester in lecture and lab.

LECTURE:

4 Exams (100 points each) 400 points

LAB:

3 Lab. exams (100 points each) 300 points

4 graded slides (10 points each) and 1 Streak culture plate..... 50 points

1 Minor unknown 100 points

1 Major unknown..... 100 points

Approximately 950 points

A = 100 – 90 %, B = 89 – 80 %, C = 79 – 70 %, D = 69 – 60 %

TENTATIVE BIOL 205 LECTURE AND LABORATORY SCHEDULE SPRING 2017 (Dr. Ana Dowey)

WEEK	Date	Lecture Topic	Chapters	Laboratory Exercises	Ex. Number
1	M 1/30	Introduction/ History of microbiology	1	Introduction: Lab safety. Techniques Microscopy	2
	W 2/1	Microscopy and cell structures	3, 4	Aseptic Technique Microbes in the environment	3, 4
2	M 2/6	Cell structures	4	Pure Culture Techniques Staining: Smear Prep and Simple Stain	5, 6
	W 2/8	Metabolism	5	Gram Staining Motility	7, 10
3	M 2/13	Metabolism	5	Differential staining: Acid-fast, Spore, Negative, and Capsule Staining.	8a, 8b, 9
	W 2/15	Microbial Growth	6	Growth Curve	11
4	M 2/20	Holiday			
	W 2/22	LECTURE EXAM 1	1 to 5	Effects on Growth: Oxygen, pH, & Temperature	12, 13, 14
5	M 2/27	Growth control	7	Growth Control: Temperature & UV	15, 16
	W 3/1	Antimicrobial agents	20	Antiseptics, Disinfectants, and Antibiotics	17, 18, 19
6	M 3/6	Genetics	8	Lab discussions, Review, Genetics lecture continued	
	W 3/8	Genetics	8	Transformation Lab exam 1*	20
7	M 3/13	Biotechnology	9	DNA fingerprinting	21
	W 3/15	LEC EXAM 2	6 – 9, 20		
8	M 3/20	Microbial Classification	10 App. A	<i>Begin Minor Unknowns:</i> morphological and cultural characteristics	24a
	W 3/22	Microbial diversity	11, 12, 13	Continue Minor Unknowns: Oxidation/Fermentation	24b
SPRING BREAK					
9	M 4/3	Continue Microbial diversity	11, 12, 13	Ex # 24c & d Continue Minor Unknowns: Hydrolytic/Degradative reactions, and MTM tests.	24c, 24d
	W 4/5	Principles of Disease and Epidemiology	14	Complete Minor Unknown Lab Exam 2 *	

* Lab exercises included in each Lab exam will be listed in lab.

BIOL 205_ GENERAL MICROBIOLOGY_PROFESSOR WAGNER SCHEDULE

DATE	WEEK	LECTURE TOPIC & TORTORA CHAPTER #	LAB EXERCISE (LE) NUMBER
4/10	11	Professor Wagner introduction Principles of Disease and Epidemiology, recap (14)	Ex 25, 26, 27: Staphylococcal, Streptococcal and Enteric (SSE) Unknowns Minor Unknown Due
4/12		Prin. of Disease & Epidemiology (14) con't Nonspecific Defenses of the Host (16)	SSE Unknowns
4/17	12	Specific Defenses of the Host: The Immune Response (17)	SSE Unknowns WITHDRAWAL DEADLINE: April 14
4/19		Practical Applications of Immunology (18)	Complete SSE Unknowns
4/24	13	Disorders Associated with the Immune System (19)	Ex 29 The Major Unknown
4/26		Microbial Mechanisms of Pathogenicity (15)	Major Unknown Ex 30 ELISA: Simulated HIV Diagnosis
5/1	14	Antimicrobial Drugs (20) Case Study Introduction	SSE Unknowns Due Major Unknown
5/3		Case Studies	Major Unknown
5/8	15	EXAM 3 (14–20)	Major Unknown
5/10		Case Studies	Major Unknown
5/15	16	Case Studies	Major Unknown- LAST DAY TO INOCULATE MEDIA Clean out Personal Boxes, Clean microscopes & straighten and fill Community Box supplies
5/17		Case Studies	Complete Major Unknowns (read results & add reagents, if necessary) Discard ALL media & inoculations
5/22	17	EXAM 4 (CASE STUDIES) (quiz will be given from 1:15–2:00pm)	OPTIONAL CUMULATIVE LECTURE EXAM (exam will be given at 2:15) Major Unknowns Due
5/24		No Lecture	FINAL LAB EXAM (exam will be given at 1:15pm) Clean up Personal & Community Boxes

* Dates and assignments may be changed at the discretion of the instructor.