

WEST LOS ANGELES COLLEGE
MICROBIOLOGY 20-GENERAL MICROBIOLOGY SYLLABUS- Section 1510

Instructor: Dr. George Agak
Email: Agakobett@hotmail.com
Room: MSA 204

Lecture: M-Th 8:00 - 10:05
Laboratory: 10:20am- 1225 pm
Office hours: 30 minutes after class

PREREQUISITE VERIFICATION: A copy of an official transcript showing successful completion of college-level biological science course (Biology 3, Biology 6, Anatomy & Physiology, or equivalent) must be submitted to the instructor by end of week one. Failure to comply with this requirement may result in exclusion from the class.

TEXTS

Tortora, Funke, & Case. Microbiology: An Introduction, Benjamin Cummings, publisher, 11th Ed. Earlier versions are not recommended.

Brown, A.E. Benson's Microbiological Applications, Short version. 12th edition., McGraw-Hill Science /Engineering /Math Publishing.

MATERIALS: masking tape, cleanser, matches, colored pencils (for laboratory drawings), Lab coat (recommended), gloves (recommended), Blue or black pen for lab notebook. No pencils or other colors allowed.

COURSE DESCRIPTION

This course is an introduction to the fundamental principles of microbiology. The laboratory portion of the course covers microscopic and cultural techniques for studying and identifying microbes.

STUDENT LEARNING OUTCOMES

As a result of taking this course, you will:

- Practice critical thinking by describing
 - The morphology, physiology and classification of bacteria, protozoa and fungi.
 - The structure and mode of multiplication of viruses
 - Selected human diseases caused by bacteria, protozoa, fungi, parasitic worms and viruses.
 - The physical and chemical methods used to control microorganisms in our environment
 - The molecular and cellular basis for the human immune response
 - The principles of chemotherapy, hypersensitivity, immunization, and serology
- Achieve technical competency in the microbiology laboratory

ATTENDANCE

MISSING ANY CLASS OF THE FIRST WEEK of lecture or lab in the summer session without reasonable excuse and without notifying the instructor will result in exclusion from the class. Consistent attendance to each laboratory is required for successful completion of this course Attendance is mandatory and roll will be taken. If you miss two consecutive sessions, you may be dropped from the class. Coming late to class and leaving early is irresponsible, impolite, disruptive and is not acceptable. If the student needs to be late, miss a class or leave early, please inform the instructor, preferable by email or before the class. Late students will be marked as absent, since attendance is taken at the beginning of the class and not after. If you decide to withdraw from this course, you must file the appropriate papers in the Admissions Office; otherwise a grade other than "W" may appear on your transcript.

ASSIGNMENTS

Read the appropriate lab exercises BEFORE you come to class (See attached schedule). Lab reports are usually due the same day that the results are read. Since your time in the lab is precious, complete the answers to the lab report questions at home.

LECTURE EXAMS and LAB QUIZZES

- 4 exams (100 points each) and 4 quizzes (20 points each) will be administrated
- Exams and quizzes will consist of objective-type questions (true/false, multiple choice, matching, short written answers)

- See Calendar for dates and coverage of each exam and quiz.
- Each exam will be 1hr 30min long. No extra time will be permitted for late arrival. If a person arrives after the first student has handed in the exam, he/she may no longer take it and will have missed that exam.
- **Missed Exam:** All exams must be taken on the day decided by the instructor. **NO MAKE UP EXAMS** will be given. An absence to an exam or quiz is excused, **only** for documented illness, documented emergencies, or by prior arrangement with, and approval of the instructor. If the absence is excused, the score for the missed exam or quiz will be replaced with the average of the other 3. If the absence is not excused, the score will be ZERO. No exceptions.
- The following curve will be used: 90-100% = A, 80-89% = B, 65-79% = C, 50-64% = D, less than 50 % = F.

DISEASE PRESENTATION

- Details will be provided in a separate sheet.

LAB NOTEBOOK

- Details will be provided on a separate sheet
- Each lab is graded up to 5 points.
- The lab notebooks are due on June 25th, July 9th and July 16th. No late notebook will be accepted.

UNKNOWN REPORT

- Details will be provided on a separate sheet
- The report should be submitted by July 22nd. **NO LATE REPORTS.** Reports submitted/posted later will not be accepted.

MICROSCOPE MAINTENANCE

- Microscopes are expensive and fragile. It is therefore essential to maintain them in good condition.
- Each student will be allocated a specific microscope and should follow the instructions given by the instructors when putting it away. Failure to do so will result in removal of points.

INCOMPLETES

Please note that “incomplete” grades are extremely rare. They may only be considered if a student is passing a class with a C or better on the final drop date and is unable, due to an emergency, to complete the course as scheduled. Otherwise, if the student decides he/she cannot finish the course with a satisfactory grade, it is his/her responsibility to drop the class.

WLAC Policy on Student Academic Honesty

West Los Angeles College is committed to preparing students to compete confidently and effectively in a rapidly changing, information-driven, technological global community. Students are expected to be honest and ethical. No acceptable rationale for dishonesty can be based on physical, emotional or learning challenges. The college expects that students do their own academic work. Acceptable academic conduct does not include cheating, plagiarism or any other unethical academic behavior. It is the student’s responsibility to know what conduct is academically honest.

Original Critical Thinking

A student is expected to work independently. Written assignments and/or projects are to be individually accomplished unless there are specific instructions to work with another student or group of students.

Citing Others’ Intellectual Work

Properly credit all sources of information using appropriate citation(s).

The following list includes some examples of academic dishonesty:

Plagiarism

- Submitting someone else’s scholarly work, such as essays or term papers, as your own.

- Submitting someone else's artistic work as your own. (Examples include musical compositions, computer programs, photographs, paintings, drawings)
- Copying, in part or in full, someone else's assignment.
- Including in your work without proper citation the ideas or language of another author.
- Including in your work without proper citation information downloaded from the Internet.

Test-taking

A student is expected to mentally isolate him/herself while taking quizzes and examinations. All responses will be based upon studied and memorized information, unless specifically instructed to use reference materials and/or specified notes. The following list includes some examples of academic dishonesty:

Cheating

- Consulting concealed notes during a quiz, test or exam.
- Using unauthorized prepared materials during a quiz, test or exam.
- Receiving information or answers from another individual during a quiz, test or exam.
- Copying information or answers from a classmate's paper.
- Using electronic devices that have not been authorized by the instructor during a quiz, test or exam.
- Inventing data for a laboratory experiment or case study.
- Submitting work prepared previously for another course.
- Talking during a quiz, test, or exam.

Other examples of academic dishonesty:

- Providing your work for someone else to copy.
- Allowing a fellow student to use answers on your paper during a quiz, test or exam.
- Passing information to a fellow student during a quiz, test or exam.
- Purposely allowing a classmate to copy your original work product, such as answers to assignments, lab reports, term papers, etc.
- Stealing tests or examinations.
- Removing tests or exams from a campus facility without the permission of the instructor.

Violators of the WLAC Policy on Student Academic Honesty are subject to disciplinary action. Depending upon the seriousness of the violation, the disciplinary action may be any or all of the following:

- The instructor may warn the student that the conduct is a violation of the WLAC Policy on Student Academic Honesty.
- The instructor may give a zero score or an "F" grade for the assignment or exam. In the case of assignments, which are not averaged into the course, grade (such as extra credit assignments) the penalty may be the subtraction of the points the assignment is worth.
- The instructor may report in writing the academic dishonesty incident to the Office of Student Services to be placed in the student's disciplinary file.
- The instructor may send a written report to the Office of Student Services about the student's violation of the Standards of Student Conduct (LACCD Board Rule 9803.12), and request that the college initiate disciplinary action leading to the suspension of the

student from the college or the expulsion of the student from the college and the entire district as authorized by LACCD Board Rule 91101.11b. In all instances, the student has the right of due process when charged with a violation of the Standards of Student Conduct. Details of the Student Grievance Procedure may be found in the West Los Angeles College catalog and in the Schedule of Classes in the section on student conduct.

Standard of Student Conduct

Faculty members are charged with responsibility for building and maintaining a classroom atmosphere conducive to learning. Disruptive, disrespectful, or obstructive behavior will be dealt with in terms specific to this syllabus and in accordance with the LACCD Standard of Student Conduct. Select forms of disciplinary action appropriate to the misconduct may be taken by an instructor when there is evidence that the student's behavior interferes with classroom instruction.

An instructor may take the following types of disciplinary action:

- **Warning-** A verbal or written notice, given to the student by an instructor. Continuation or repetition of the specified conduct may be cause for further disciplinary action.
- **Removal by Instructor** - An instructor may remove (suspend) a student from his or her class for the day of the incident and the next class meeting. During this period of removal, the student shall not return to the class from which he or she was removed without the permission of the instructor of the class.

Students may refer to the College Catalog or the online student orientation at www.wlac.edu; click "Counseling, Assessment and Orientation," then scroll down to "Orientation" for complete details regarding the aforementioned policies.

Cell Phone and Other Communication Devices

If you bring your cell-phone to class, be sure to have it in a mode where it will not ring and disturb others. If you have to answer an emergency phone call, please step out of the classroom. Devices of this type should be placed on vibrate and never visible during class time.

Classroom and Campus Cleanliness

Please help us keep the classroom and campus grounds clean. **No food or beverages is permitted inside instructional classrooms /labs.** Please use the receptacles to dispose of trash.

Electronic Mail

Electronic mail is the official method of communication for delivery of college information. Student email addresses will be recorded in the college's electronic directories and records. If you need to update an email address, visit www.wlac.edu, click "For Students," then "Student Information System." Once you log in, you can change your email by clicking "edit" at the top of the page next to your email address.

Instructional Support and Monitoring

- Monitor your academic progress online at www.wlac.edu click "Counseling, Assessment and Orientation," then on the DegreeWorks icon, or visit the Counseling Office in A13.
- For instructional support and assistance with research projects, visit the Learning Skills Center and Library in HLRC.

Instructional Support and Monitoring

DATE	LECTURE TOPIC	READING ASSIGNMENT
June 15	Introduction	Chapters 1 & 3
June 16	Prokaryotic cells	Chapter 4
June 17	Classification of Microorganisms, Protozoa	10
June 18	Microorganisms, Fungi, Parasitic worms	Chapters 11, 12
June 22	EXAM # 1 (Chapters 1, 4, 10,11, 12) Microbial Metabolism	Chapter 5
June 23	Microbial Growth	Chapter 6
June 24	Control of Microbial Growth	Chapter 7
June 25	Microbial genetics I	Chapter 8
June 29	Microbial genetics II In Class Assignment: genetics	Chapter 8
June 30	Viruses	Chapter 13
July 1	Principles of Epidemiology	Chapter 14
July 2	Mechanisms of Pathogenicity	Chapter 15
July 6	EXAM # 2 (Chapters 5, 6, 7, 8,13, 14) Non-specific Defenses of the Host	Chapter 16
July 7	Adaptive Immune Responses	Chapter 17
July 8	Diagnostic Immunology	Chapter 18
July 9	Hypersensitivity Antimicrobial Drugs	Chapter 19 Chapter 20
July 13	EXAM # 3 (Chapters 15, 16, 17,18, 19,20) Selected Pathogens/ student presentations	Chapter 21
July 14	Selected Pathogens/ student presentations	Chapter 21
July 15	Selected Pathogens/ student presentations	Chapter 22
July 16	Selected Pathogens/ student presentations	Chapter 22
July 20	Selected Pathogens/ student presentations	Chapter 24
July 21	Selected Pathogens/ student presentations	Chapter 24
July 22	Selected Pathogens/ student presentations	Chapter 25
July 23	Selected Pathogens/ student presentations	Chapters 26
July 24	Exam# 4 (Ch. 21, 22, 24, 25, 26)	Good luck!

Instructional Support and Monitoring

DATE	TOPIC	EXERCISE
June 15	<ul style="list-style-type: none"> • Lab Orientation • Locker Check-in • Use and Care of the Microscope 	1
June 16	<ul style="list-style-type: none"> • Ubiquity of Bacteria • Aseptic Techniques 	6 8
June 17	<ul style="list-style-type: none"> • Observations of Ubiquity of Bacteria & Aseptic Techniques • Protozoa (slides) 	6, 8 5
June 18	<ul style="list-style-type: none"> • Fungi (slides) • Helminthes: Parasitic Worms (slides) 	7
June 22	<ul style="list-style-type: none"> • Smear Preparation • Simple Staining 	10 11
June 23	<p>QUIZ #1: Exercises 1, 6, 8, 5 Fungi and Helminthes</p> <ul style="list-style-type: none"> • Gram Staining 	14
June 24	<ul style="list-style-type: none"> • Spore Staining • Acid Fast Staining 	15 16
June 25	<ul style="list-style-type: none"> • Pure Culture Techniques : Streak Plate Method (Isolation) • LAB NOTEBOOK DUE 	9
June 29	<ul style="list-style-type: none"> • Streak Plate Method (Sub-culturing) • UV Light: Lethal Effects 	9 28
June 30	<p>QUIZ #2: Exercises 10, 11, 14, 15, 16, 9</p> <ul style="list-style-type: none"> • Streak plate Method (Evaluation) • Observations of UV Light Lethal effects 	9 28
July 1	<ul style="list-style-type: none"> • Evaluation of Antiseptics: Filter paper Disk Method 	32
July 2	<ul style="list-style-type: none"> • Evaluation of Effect of Antiseptics 	32
July 6	<ul style="list-style-type: none"> • Effects of Temperature on bacterial Growth 	25
July 7	<p>Quiz #3: Exercise 9, 28,32</p> <ul style="list-style-type: none"> • Observation of Effect of Temperature 	25
July 8	<p>Unknown:</p> <ul style="list-style-type: none"> • Gram staining & Microscopic morphology • Streak plate Colony Isolation 	34
July 9	<p>Unknown:</p> <ul style="list-style-type: none"> • Gram staining & Cultural Characteristics • Working slant preparation • LAB NOTEBOOK DUE 	35
July 13	<p>Unknown:</p> <p>Gram stain of Working Slant Carb Fermentation Test and catalase Test</p>	36

July 14	Unknown: <ul style="list-style-type: none"> • Results of Carbohydrate Fermentation • Mixed Acid & Butanediol Fermentation Tests (MR-VP), & Citrate test 	36
July 15	Unknown: <ul style="list-style-type: none"> • Starch Hydrolysis • H₂S Production & carbohydrate Confirmation (Kligler's Iron Agar) 	37 38
July 16	Unknown: <ul style="list-style-type: none"> • Results of Starch Hydrolysis & Kligler's Iron Agar • Results of MR-VP and Citrate Tests • LAB NOTEBOOK DUE 	37-38
July 20	Unknown: <ul style="list-style-type: none"> • Catch up and Identification • Antimicrobial Sensitivity Testing 	31
July 21	<ul style="list-style-type: none"> • Observation of Antimicrobial Sensitivity Testing • Unknown report Submission 	31
July 22	Quiz #4 Exercises 34-38 and 31 <ul style="list-style-type: none"> • Unknown Report Due 	
July 23	<ul style="list-style-type: none"> • Clean up • Locker Check-out • Microscope Clean up 	

Grading System

Exam/Assignment	Points
Four Exams (100 points each)	400
Four laboratory Quizzes (20 points each)	80
Laboratory notebook (20 points each)	80
Unknown report	100
Student presentation	40
Total points	700

The following curve will be used: 630-700 points = A, 560-629 = B, 455-559 = C, 350-454 = D, less than 349 = F.

Good luck!
Dr. George Agak