

GENERAL MICROBIOLOGY SYLLABUS (Section 4512)

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 September 23, 2014. 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

MATERIALS: masking tape, cleanser, matches, colored pencils (red, purple, green, blue)

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

Attendance is mandatory and roll will be taken. If you miss two consecutive sessions, you may be dropped from the class. 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.

GRADES

Three midterm exams will be given. Your grade in the course will be based upon: 2 highest midterm exams (40% of grade) lab work (30% of grade), and a cumulative final exam (30% of grade). The following curve will be used: 90-100% = A, 80-89% = B, 65-79% = C, 50-64% = D, less than 50 % = F. **ALL MAKE-UP EXAMS WILL BE ESSAY AND/OR MULTIPLE CHOICE EXAMS.** There will be no Make-up for exam 3 if you already took Exams 1 and 2.

OFFICE HOURS (in faculty offices)

Tuesdays 5:45-6:45PM; Thursdays 5:45-6:45PM
Email: Agakobett@hotmail.com for appointment

General Microbiology
 (Section 4512)

TENTATIVE LECTURE SCHEDULE

DATE	LECTURE TOPIC	READING ASSIGNMENT
Sept 2	Introduction	Chapters 1 & 2
Sept 4	Prokaryotic cells	Chapters 3 & 4
Sept 9	Prokaryotic cells	Pages 242-247
Sept 11	Classification of Microorganisms, Protozoa	Chapters 10, 11, 12
Sept 16	Fungi	Chapters 12
Sept 18	Parasitic Worms	
Sept 23	Microbial Metabolism	Chapter 5
Sept 25	Microbial Growth and Exam 1 Review	
Sept 30	EXAM # 1 (Chapters 1, 4, 10,11, 12)	Chapter 6
Oct 2	Control of Microbial Growth	Chapter 7
Oct 7	Microbial genetics	Chapter 8
Oct 9	Viruses	Chapter 13
Oct 14	Viral multiplication	Chapter 13
Oct 16	Principles of Epidemiology	Chapter 14
Oct 21	Mechanisms of Pathogenicity & Exam 2 review	Chapter 15
Oct 23	EXAM # 2 (Chapters 5, 6, 7, 8,14, 13)	
Oct 28	Non-specific Defences of the Host Adaptive Immune Responses	Chapter 16 Chapter 17
Oct 30	Immunization	
Nov 4	Diagnostic Immunology	Chapter 18
Nov 6	Diagnostic Immunology (Continued)	
Nov 11	Hypersensitivity/Autoimmunity & Exam 3 review	Chapter 19
Nov 13	EXAM # 3 (Chapters 15-19)	
Nov 18	Antimicrobial Drugs	Chapter 20
Nov 20	Selected Pathogens/ student presentations	Chapter 20
Nov 25	Selected Pathogens/ student presentations	Chapters 24
Nov 27	NO CLASS-THANKSGIVING HOLIDAY	Chapter 25
Dec 2	Selected Pathogens/ student presentations	Chapter 21-23, 26
Dec 4	Selected Pathogens/ student presentations	
Dec 9	Selected Pathogens/ student presentations	Chapter 21-23, 26
Dec 11	Selected Pathogens/ student presentations	Chapter 21-23, 26
Dec 16	FINAL EXAM (18:45-20:45)	GOOD LUCK!

**Microbiology 20, Section 4512, Fall 2014 Tentative LAB SCHEDULE
 (Tuesday & Thursday 1845-1945h) Dr George Agak**

WEEK #	DATES	EXERCISE	TOPIC
1	Sept 2 Sept 4	1	Lab Orientation & Locker Check-in Use and Care of the Microscope
2	Sept 9 Sept 11	6 6 & 8	Ubiquity of Bacteria Observation of Ubiquity of Bacteria & Aseptic Techniques
3	Sept 16 Sept 18	8 5	Observations of Aseptic Technique & Protozoa Fungi
4	Sept 23 Sept 25	7 Slides	Helminths Smear Preparation & Simple Staining
5	Sept 30 Oct 2	10 & 11 14	Gram Staining Gram Staining
6	Oct 7 Oct 9	14 15	Spore Staining Acid Fast Staining
7	Oct 14 Oct 16	16 9	Pure Culture Techniques : Streak Plate Method (Isolation) ^a Pure Culture Techniques (Sub-culturing)
8	Oct 21 Oct 23	9 9 & 28	Pure Culture Techniques (Evaluation) & UV Light: Lethal Effects Observations of UV Light Lethal Effects
9	Oct 28 Oct 30	 32 32 25	Effect of Antiseptics: Filter Paper Disk Method Observations of Effects of Antiseptics Effect of Temperature on Bacterial Growth ^b
10	Nov 4 Nov 6	25 34	Observations of Effect of Temperature Unknown Stock Preparation, Gram Stain & Streak Plate Colony Isolation
11	Nov 11 Nov 13	35 35	Unknown Cultural Characteristics & Working Stock Preparation Unknown Cultural Characteristics & Working Stock Preparation
12	Nov 18 Nov 20	36 36	Carb Fermentation and Catalase Tests Observations of Carb Fermentation and Catalase Tests Mixed Acid & Butanediol Fermentation Tests (MR-VP) & Citrate Test
13	Nov 25 Nov 27	36, 37 & 38	Observations of MR-VP & Citrate Tests, Starch Hydrolysis, H ₂ S production (Kligler's Iron Agar) NO CLASS – THANKSGIVING
14	Dec 2 Dec 4	36 – 38 31	Observations of Starch Hydrolysis and H ₂ S production (Kligler's Iron Agar) Unknown: Test Catch up & Final Results
15	Dec 9 Dec 11	31	Antimicrobial Sensitivity Testing Observations of Antimicrobial Sensitivity Testing Laboratory Clean-up & Locker Check-out

WLAC Policy on Student Academic Honesty
(Adopted by the WLAC Academic Senate June 2006)

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:

- 1) **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.
- 2) **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.

Best wishes!

Dr. George Agak

Email: Agakobett@hotmail.com