

SYLLABUS

QUARTER: SPRING 2009

NAME OF COURSE: MICROBIOLOGY PATH -132

LENGTH OF COURSE: 3 units, 33 hours (3 hrs lecture, 3 hrs lab/week)

COURSE DESCRIPTION: This course covers the characteristics of eucaryotic and, procaryotic microbes and viruses. Microbial growth and reproduction are studied as well as the role of various agents in the control of growth. The relationship between virulence of the parasite and resistance of the host is stressed as a paramount factor in the process of infectious disease. The immunological response of the host to the presence of microbes is also emphasized. The laboratory will introduce students to techniques and the application of such procedures to the Chiropractic Clinic and practice. Students will also perform some of the procedures used to characterize and study microorganisms.

PREREQUISITES: CHEM -121, PATH-120

COURSE OFFERED BY: Physiology / Pathology Department
Sue Ray, M. S., Department Chair

INSTRUCTOR: [Dave Straub, M.S.](#)
Email: dstraub@lifewest.edu
Phone: 780-4500 x 2271
Room: 171

OFFICE HOURS: Mon 12:00-1:00 & Tues 12:00-1:00
Wed 12:00-1:00 & Thurs 12:00-1:00

REQUIRED TEXT: Microbiology Lab/Lecture Class Notes

RECOMMENDED TEXTS: Talaro KP. *Foundations in Microbiology*. 6th ed. 2008
Leboffe MJ *A Photographic Atlas for the Microbiology Laboratory*. 2nd ed. 1999
Strohl WA. *Microbiology*. 2008

REFERENCE TEXTS: On reserve in the Library photographic atlas

MATERIALS: Handouts are available in the bookstore.

METHOD OF INSTRUCTION: Lecture, with overhead transparencies, laboratory exercises

GRADING AND EXAMS:

EVALUATION: Final letter grade is based on performance in:

Lecture - 2 written examinations, midterm (50) Final Exam (100). You must have a passing grade on exams in order to pass the class.

- A - 4.0 Superior Work
- B - 3.0 Above Average Work
- C - 2.0 Average Work
- D - 1.0 Poor - The student must repeat the entire course below 70%

In order to maintain satisfactory Academic Progress, a student must maintain a 2.0 or better in each and every course. **Any grade less than a C must be remedied by repeating the class.**

ATTENDANCE:

Instructors are required to record student attendance. Roll can be taken at any time during the class period. The instructor may call names, pass a roll sheet, use submitted classroom assignments, or observe the students. If the instructor calls roll, a student who is not present when his or her name is called is absent. If the instructor uses a roll sheet, students have 15 minutes to sign in.

If a student arrives after attendance has been taken but within the first 15 minutes of the start of the class session, the student must see the instructor at the end of the class hour to request that his or her absence be changed to a tardy. Three tardies attendance constitute one hour of absence. Failure to notify the instructor will result in the absence mark remaining on the attendance sheet. This cannot be changed later. **No additional assignments can be used to compensate for absences except as outlined in the college course overlap policy.**

If a student leaves after attendance has been taken, the instructor can change the attendance record to indicate an absence for the class period. Any request to leave class early must be approved by the instructor before the class session.

A student who misses more than 10% of the class hours will be over-cut from the class. If the student presents documentation to the dean verifying a documented emergency or other excusable reason that prevented attendance for 15% of the class hours, the dean may permit him or her to continue attending the class. In determining whether or not to permit a student to continue attending a class, the dean will consider the student's overall attendance record and academic standing. Under no circumstances, regardless of any personal situation, will a student who misses 20% of the class hours receive course credit. Excused absences still count toward total absences; they only may entitle a student to make-up assignments and examinations.

A student is responsible for keeping track of his or her own attendance and absences. Instructors may but are not required to provide courtesy notices indicating that a student is approaching or has reached over-cut status.

Documented emergencies include hospitalization, accidents, or death in the family. Undocumented illness, not “feeling well,” weddings, events, extended vacations or school holidays, non-school scheduled seminars, etc., are not considered excusable reasons for missing class.

MAKE-UPS:

Students are expected to take all examinations and complete assignments as scheduled.

Students who have missed an exam due to a documented emergency or other excusable reason must pick up a “Request for Alternative Testing” form in the Dean’s Office. At that time, they will explain the circumstances of their emergency and provide documentation to the Dean of the College. If the Dean authorizes the exam, the student must then present the form to his/her instructor to complete the necessary information. The student must then take the completed and signed request to the Student Services Office to schedule a time for the exam to be proctored. As indicated near the top of the form, Student Services requires a minimum of 5 working days to set up and schedule the approved exam.

Documented emergencies include hospitalization, accidents, or death in the family. Undocumented illness, not “feeling well,” weddings, events, extended vacations or school holidays, non-school scheduled seminars, etc., are not excusable reasons for making-up an exam or assignment.

EXTRA CREDIT: There will be no extra credit work accepted in this class.

CONDUCT AND RESPONSIBILITIES

It is the student’s responsibility to maintain professional standards of behavior and attire while on campus. Students are expected to be prepared for instructional activities. They must bring required supplies/equipment and dress appropriately in accordance with the instructor’s directions. Failure to do so can result in the student being marked absent for the class session. Any disruptive activity (e.g. use of cell phones, side conversations) in the classroom is prohibited. If the instructor requires a disruptive student to leave the classroom, the student remains responsible for all information and will be marked absent for the class session. The dean will impose sanctions for unprofessional behavior. Any form of deceit, fraud, plagiarism, unauthorized collaboration, or theft will result in failure of the course and referral to the dean for disciplinary sanctions.

INDEPENDENT STUDENT WORK

All assignments and exams must be the product of the individual student’s original efforts for this class. Collaboration is prohibited.

PROCEDURES FOR REVIEWING EXAMS

The instructor has not authorized distribution of old exams. Any possession of old exams is prohibited. The instructor may either conduct review sessions in class or may meet with a

student to review his or her exam during office hours for two weeks following the exam (unless there is a shorter time period until the last scheduled office hour during the last week of classes.)

Students may not review mid-term exams during final exam week. The possession of any exam other than during a review session constitutes unprofessional conduct.

REQUEST FOR TESTING ACCOMMODATIONS

The student must notify the instructor of any authorized testing accommodations at least one week prior to the exam. Once arrangements have been made, they cannot be changed without approval from the instructor and the office of student services.

The student must notify the instructor of any schedule conflicts during final exam week at least one week prior to the beginning of final exams. Appropriate paperwork must be completed and submitted to the office of student services. Once arrangements have been made, they cannot be changed without approval from the instructor and the office of student services.

COURSE OBJECTIVES:

Each student is expected to gain a firm understanding of:

- A) The crucial ecological role of microorganisms.
- B) The role of microorganisms in public health e.g. (food, water and air quality)
- C) Bacterial physiology and genetics and their roles in infectious disease
- D) The structure, function, and host interactions of viruses in infectious disease
- E) Protozoa and fungi and how their complex life cycles are involved in pathogenesis
- F) The details of host-parasite relationships that determine the outcome of an infectious process

MICROBIOLOGY SCHEDULE

<u>WEEK</u>	<u>LECTURE TOPICS</u>	<u>LAB OVERVIEW</u>
1	Introduction; some microbial cell types chapters 1, 2	Lab safety, Microscopy, Survey of Microbes
2	procaryotic cell morphology chapter 3	Isolation of microbes Staining techniques
3	Eukaryotic cell morphology: Fungi and Protozoa chapter 4	Culture techniques

4	Viruses chapter 5	Media Environmental Sampling
5	Bacterial genetics, Metabolism, growth chapters 5, 8	Metabolic Activities GM + Rods
6	Microbial control Chemotherapy chapters 9, 10	Microbic Activities (continued) GM + Cocci
7	Normal flora Host defense mechanisms chapters 11,12	Intestinal pathogens GM - Rods
8	Host defense mechanisms Immunology/Vaccines chapters 12,13	Applied Microbiology
9	Immunology II: serology chapter 13	Medical Microbiology
10	Immunology III: Allergy Immunodeficiency chapter 14	Review for Final