

SYLLABUS FOR
BI 307 – 01 GENERAL MICROBIOLOGY
SUMMER SEMESTER 2012

INSTRUCTOR: Dr. Donald Roush

OFFICE: 210 FLOYD SCIENCE BUILDING -- OFFICE HOURS POSTED ON OFFICE DOOR

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TEXT: MICROBIOLOGY: AN INTRODUCTION – 11th ED., TORTORA, FUNKE & CASE;
BENJAMIN CUMMINGS, PUBLISHER

LAB MANUAL: Microbiology Laboratory; BI 307L; Roush, University of North Alabama, Biology

COURSE CONTENT: MINIMUM CHAPTERS

THE MICROBIAL WORLD AND YOU Chapter 1

OBSERVING MICROORGANISMS Chapter 3

FUNCTIONAL ANATOMY OF PROKARYOTIC CELLS Chapter 4

*** 1st EXAM ***

CLASSIFICATION OF MICROORGANISMS Chapter 10

PROKARYOTES* Chapter 11

290-3-3-.16(1)(c)5. Causes, characteristics, and avoidance of viral, bacterial, and parasitic diseases. See long paragraph below. Assessed on lecture examination.

FUNGI , ALGAE, PROTOZOA, AND HELMINTHS* Chapter 12

*290-3-3-.16(1)(c)5. Causes, characteristics, and avoidance of viral, bacterial, and parasitic diseases. This chapter includes a section on “Medically Important Protozoa,” including *Plasmodium*/malaria, as well as information about parasitic helminths (worms) (and see below). Assessed on lecture examination.*

VIRUSES* Chapter 13

290-3-3-.16(1)(c)5. Causes, characteristics, and avoidance of viral, bacterial, and parasitic diseases. This chapter includes a section on “Viruses and Cancer” (and see below). Assessed on lecture examination.

*Material presented in this section has been compiled from several chapters 21 – 26

290-3-3-.16(1)(c)5. Causes, characteristics, and avoidance of viral, bacterial, and parasitic diseases. The approach taken to the study of viruses, bacteria, and parasites in Chapters 11-13 is a taxonomic one. As indicated immediately above, additional information about causes, characteristics, and avoidance of diseases caused by these agents/organisms is incorporated from Chapters 21-26, which are entitled, respectively, “Microbial Diseases of the Skin and Eyes,” “Microbial Diseases of the Nervous System,” “Microbial Diseases of the Cardiovascular and Lymphatic Systems,” “Microbial Diseases of the Respiratory System,” “Microbial Diseases of the Digestive System,” and “Microbial Diseases of the Urinary and Reproductive System.” Assessed on lecture examination.

*** 2nd EXAM ***

MICROBIAL METABOLISM

Chapter 5

MICROBIAL GROWTH

Chapter 6

CONTROL OF MICROBIAL GROWTH*

Chapter 7

*Material supplemented from chapter 20

MICROBIAL GENETICS

Chapters 8 (9)

*** 3rd EXAM ***

PRINCIPLES OF DISEASE & MECHANISMS OF PATHOGENICITY

Chapters 14 & 15

290-3-3-.16(1)(c)5. *Causes, characteristics, and avoidance of viral, bacterial, and parasitic diseases.* These chapters include extensive material about this topic. Assessed on lecture examination.

IMMUNITY

Chapters 16 - 19

ENVIRONMENTAL & APPLIED MICROBIOLOGY

Chapters 27 & 28

*** COMPREHENSIVE FINAL EXAM ***

COURSE GOAL: The goal of this course is to introduce to the student the morphology, physiology, and taxonomy of microorganisms and how they relate to man and the environment as well as new developments in the field of microbiology and what influences they will have in the future.

GRADING SCALE: A ten point scale based on total points accumulated. (90% and above of total possible points would equal an "A", 80% and above a "B", 70% and above a "C" etc.) The final semester average may be adjusted based on overall class performance.

LABORATORY REPORTS: Each lab report should be completed in **PENCIL** in the lab manual. All reports are to be submitted at the beginning of the lab period following the completion of the exercise **OR** when designated by the instructor. For those reports that involve staining of microorganisms, appropriate coloring may be added **BUT IS NOT REQUIRED**. Reports will be graded for correctness, neatness, spelling, etc. Each item marked incorrect on the report will result in point reduction based on the type of error or mistake made. Supplemental question for each laboratory may also be required to be completed. **Internet** assignments may be made during the semester and results treated as laboratory grades.

NO MISSED LABS OR LAB QUIZZES CAN BE MADE UP!!!

All laboratory reports must be completed and submitted even if a lab has been missed!!

ATTENDANCE: Attendance is mandatory (This is a University policy.) and will be taken in lecture and lab by the signing of a roll sheet and/or by short quizzes. **Failure to sign the roll will be counted as an absence regardless of whether you are present or not.** The total number of absences allowed will be **EIGHT (8)** with no more than **TWO (2)** of this total from laboratory. Excused absences will be allowed to make up work from lecture only. Illness verified by a physicians excuse, death in the family, absence as the result of a required regularly scheduled University sponsored function will be considered as excused absences. All others will be considered as unexcused. The student is responsible for any missed work from lecture or lab regardless of whether the absence was excused or unexcused. **All absences whether excused or unexcused will be counted toward the total allowed.**

ANY MISSED EXAM WILL BE MADE UP AT THE DISCRETION OF THE INSTRUCTOR AFTER DOCUMENTATION AND VERIFICATION OF REASON FOR ABSENCE FROM THE EXAM.

Test material will be taken from the text, lecture, and lab. Lecture material will come from a variety of sources other than the text, therefore class attendance is important. **Final Exam: Monday, 30 July 7, 2012; 12:50 PM**

ANY INCIDENT INVOLVING HONESTY OR PLAGIARISM WILL RESULT IN A GRADE OF "F"!!
ALL CELL PHONES, ELETRONIC MEDIA DEVICES, BLACKBERRIES, IPODS, COMPUTERS, ETC ARE TO BE
TURNED OFF AND STORED OUT OF SIGHT DURING ALL LECTURE AND LABORATORY PERIODS!! ANY
ELETRONIC MEDIA DEVICE IN EVIDENCE DURING ANY TESTING PERIOD WILL BE CONSIDERED AS
CHEATING!!

NO TOBACCO PRODUCTS OR EATING WILL BE ALLOWED DURING THE LECTURE PERIOD.

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact Developmental Services prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact Developmental Services.

As with any science laboratory course, some potential or degree of risk is always possible, regardless of the number or quality of guidelines imposed to control those risks. With these facts in mind, the following basic guidelines have been established for your protection. In addition to these written statements and other comments made to you in this introductory period, special regulations will on occasion be required and furnished to you at appropriate times.

Anyone Tardy to lab for any reason will NOT be allowed to take the lab quiz for that lab under any circumstances!!!

CELL PHONES WILL NOT BE ALLOWD OR USED IN LABORATORY FOR ANY REASON!!!!

MICROBIOLOGY LABORATORY GUIDELINES

1. **ALWAYS** wear safety glasses during the lab!
2. NO SMOKING, DRINKING, EATING OR CHEWING GUM will be allowed in the lab.
3. NO BARE FEET are allowed in the laboratory. Long hair must be held above the shoulders.
4. The lab benches are to be cleaned with disinfectant before starting the exercises and again after finishing the day's exercises.
5. All materials and books are to be kept to a minimum; maintain laboratory cleanliness---keep paper towels etc. out of the sinks, keep work areas clear of un-necessary materials and keep stools under the bench when not being used.
6. **Use Caution** at all times when using any bacterial cultures. **REPORT ALL SPILLED OR CONTAMINATED BACTERIAL CULTURES** to the instructor immediately so that proper clean up and decontamination can be instituted.
7. **REPORT ALL ACCIDENTS** to the instructor immediately. (Such as: broken glassware, dropped tubes, spilled media, etc.)
8. **ALWAYS** dispose of unused and/or contaminated material as indicated by the instructor.
9. Report problems with microscopes to the instructor as soon as they are discovered; make sure all microscopes are properly cleaned and returned to the cabinet after using them.
10. Identify to the instructor any conditions that impact your health and exposure to microbial agents (cuts or other open wounds, burns, pregnancy, compromised immune systems, etc.)

11. Wash hands and return safety glasses to the lab cabinet before leaving the lab. **Also remember** to replace the stools under the bench before leaving the lab!!

This lab will be conducted on the honor system. I agree to do all work individually unless the project was completed while working in a group. If I violate this pledge, I understand the penalty will be to withdraw from this course or to receive a two letter grade reduction of my final course grade.

I agree to NEVER remove any viable materials (cultures of any kind), growth media, stains, slides or any other items from the laboratory under any conditions during my enrollment in this class. Failure to comply with this agreement is subject to failure of the class (Not just the lab portion)!!!

I have heard, read and I understand the above regulations and agree to follow them.

Student's Signature: _____

Date: _____