ABIO 330 MICROBIOLOGY Falls 2005
SYLLABUS

INSTRUCTORS: Dr. Robin Brigmon, Rm. 203 Science Build.
Laboratory Instructor: Brigmon
Email: RobinB@USCA.edu
LABORATORY ASSISTANTS: Brian Nevius, Christina Wilson

COURSE LOCATION: Lecture, Rm. 213 SBDG, T 6:00-830
Laboratory, Rm. 213, SBDG, Th 6:00-830.
TEXT: Biology of Microorganisms, Brock *et al.* 11th ed.
LAB MANUAL: Holley and Smith. Specific Laboratory instructions will given during the start of the lab. DO not be late. The Manual only gives general guidelines and is not to be followed to the letter.

COURSE LEVEL AND CREDIT: 2nd to 3rd year Biology Major Level, 4 hours credit

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ASSESSMENT OF STUDENT PERFORMANCE: Students will be assessed based on understanding of subject matter, ability to determine important concepts, proficiency in the laboratory and attitude. Weekly tests will be given to determine understanding of subject matter; you must be there during tests since make-ups are not feasible. A midterm and comprehensive final exam will test your ability to retain the information and your ability to determine important concepts. Weekly tests, mid-term and the final exam will count for 75% of the final grade. The remaining 25% is your laboratory grade. Part of this grade is for proficiency and attitude. Be aware that this is not for meeting every lab on time (although your grade will surely drop if you miss a lab, or are consistently late). It is your instructor's determination of your proficiency and attitude. This is determined by agreement among the instructors comparing all students with respect to their leadership roles in lab; how quickly and well techniques are mastered; and if their presence in lab was a help for other students and conducive to learning. Most of your lab grade will be based on your write-up of your unknown. **The first part of lab is to teach you how to work in the laboratory independently. You will repeat all exercises on your unknown using what you learned during the first half of lab.** Some students excel in laboratory skills while some do not. Do your best and assistance is available.

COURSE GOALS:
(1) To introduce students to modern microbiology. This includes current concepts of the evolution, phylogeny, genetics, metabolism and ecology of prokaryotic organisms.

(2) To teach to both classical and modern microbiological techniques. This will be done in three ways: through hands-on laboratory experiences; videos on techniques shown in the lab; and during lectures.

(3) To introduce applications of basic research in microbiology. Examples are given in the lectures on therapeutic products, antibiotics, pathogenic microorganisms and immunology.

(4) To introduce students to the applications of microbiology in everyday life. Examples are given in the lectures on environmental microbiology, industrial applications, and public health.

STATEMENT FOR DISABLED STUDENTS: "If you have a learning or physical disability which might affect your performance in this class, please contact the Office of Disabled Student Services. Once an evaluation has been made, appropriate accommodations will be made."

HINTS ON DOING WELL IN THIS COURSE: (1) Never miss a class or lab. (2) Take good notes during lecture. (3) If you have a question speak up in class, don't wait until later. (4) Read the assigned material before class, don't wait until after the material is covered in class. (5) Rewrite and review your notes promptly after class using your text for more explanation. (6) Form nightly study groups and lecture to each other. These techniques are highly effective for learning the material. None of these guarantee a good grade, but if you do them all and maximize your efforts your chances are very good. Material on all tests will be from textbook. Additional examples given in lecture and on video will be to reinforce the ext material. Dr. Brigmon will be available for questions before and after class as well. Please contact by email if necessary.

UNSEEN LIFE ON EARTH: As part of the American Society for Microbiology's Microbial Literacy Program, a series of videos will be shown during lectures to insure a complete overview of the field. Questions from theses videos and the ensuing discussions relevant to the text may be included on tests.

SEQUENCE OF TOPICS

Unit 1 Principles of Microbiology

Unit II Evolutionary Microbiology and Microbial Diversity

Unit III Metabolic Diversity and Microbial Ecology

Unit IV Immunology Pathogenicity, and Host Diseases

Unit V Microbial Diseases

Unit VI Microorganism as Tools for Industry and Research