Host-Microbe Interactions: BIOL 5270/6270

INSTRUCTOR: Dr. Laura Suh, Department of Biological Sciences  
(844-1338, suhlaur@auburn.edu)


LECTURES: Lectures are from 9:30-10:45 in Room 009 Life Sciences

Optional TEXT: Symbiosis: An Introduction to Biological Associations. Surindar Paracer and Vernon Ahmadjian. ISBN#0195118065. In addition, I will make review articles/chapters available on select topics.

PREREQUISITES: BIOL 3000 (Genetics) or 3020 and BIOL 3200 (Microbiology)

COURSE DESCRIPTION: This course will explore interactions between microbes and other organisms such as plants, insects and animals.

Goals for this class:
- learn basic host-microbe vocabulary
- understand how these interactions evolve, are regulated and their ecological impact
- integrate knowledge from other subjects

Class structure:
I will lecture on each of the topics given in the schedule. For some of the topics, we will also have hands-on demonstrations. Microscopes will be used occasionally to examine prepared slides and live interactions in the class. For example, during our discussion of termite-microbe interactions we will examine the microbial population living in the termite gut using microscopes. We will also attempt to culture aerobic and anaerobic microbes from this environment.

Periodically we will have group discussions. The format will vary. Generally, I will propose one or more questions that the class as a group will discuss/answer during class time. Participation in these discussions is a must and will be graded accordingly.

WebCT- Lecture slides will be available on WebCT.

Exams and Grading: Final grades will be assigned using a 10 point scale as follows:
A= 90-100%
B=80-89
C=70-79
D=60-69
F=59 and below
**Undergraduates (UG)**- There will be four exams: three mid-term exams and a final exam. Each exam is worth 100 pts. Tests will be short answer, matching and some multiple choice. Participation in discussions and group activities=100 pts.

**Graduate Students (G)**- There will be four exams: three mid-term exams and a final exam. Each exam is worth 100 pts. Tests will be short answer and essay. Participation in discussions and group activities=100 pts. Near the end of the semester you will be required to select and present, in groups of two, a research article using Powerpoint to the class. The presentation is worth 100 points.

**Note:** Test corrections must be completed within two weeks of receiving your graded test.

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**IMPORTANT INFORMATION OF SPECIAL NOTE:**

**GENERAL POLICY and PROCEDURES:** You should retain this schedule of lecture topics, reading assignments, test days, and relevant instructions for reference throughout the semester. You are responsible for learning the material that will be covered in the examinations, for preparing for lectures by reading assignments beforehand, and for being present on test dates without further notice or additional reminders.

Missing exams should be avoided at all cost. Valid reasons for absences as outlined in the Tiger Cub are: 1) **severe** illness, 2) documented personal or family emergencies, 3) official University excuses. Illness will necessitate a note from the doctor or infirmary (as will a family emergency). Official University excuses will likewise require documentation (see Tiger Cub, p. 86). Preferably, advise me beforehand regarding absences on a test day. **Additionally, if you wish to make up a missed exam the instructor must be contacted before the next class period following the exam, and your written excuse presented and a makeup scheduled, or else no make up exam can be granted.** If it is not possible to contact the instructor by the next class meeting, but you have a valid excuse for your absence and an excuse for not contacting the instructor, you may be allowed to make-up exam only under unusual extenuating circumstances, but contact with the instructor at the earliest possible time is **MANDITORY.**

**CHEATING: VIOLATION OF THE UNIVERSITY ACADEMIC HONESTY CODE WILL BE DEALT WITH AS OUTLINED IN THE SGA CODE OF LAWS, TITLE XII (TIGER CUB, pp. 125-126).** All forms of academic dishonesty will be reported to the
Academic Honesty Committee. This may result in failing grade, suspension, and/or expulsion from the University. These are serious situations, and any discovered attempt at academic dishonesty will be treated as extremely grave. (Note this includes turning in an excuse for an absence that cannot be verified as true.)

SPECIAL ACCOMMODATIONS: Students who need special accommodations must visit The Program for Students with Disabilities (PSD) and obtain a memo in order for those accommodations to be met. Exam accommodations should be arranged at least one week in advance. If at any time during the semester you feel that the accommodations we have put in place are not working, please consult with me and/or the professional staff in the PSD office. If you do not have a memo from the PSD office that alerts me about your accommodations, it is recommended that you make an appointment to see them in 1232 Haley Center (844-2096).

Special Request: Cell phones and pagers should be turned off for the duration of the lecture. Students may be asked to leave the classroom for the remainder of the lecture in the event one of these devices is activated during the lecture.

Justification for Graduate Student Credit
Grading for graduate students differs from undergraduates in the exam format. Undergraduate exams are multiple choice and short answer, while graduate student exams are short answer and essay. In addition, graduate students are graded on a review of a published paper and presentation of that review to the class.

This course is designed to build upon and integrate graduate student’s knowledge in the fields of microbiology, genetics and physiology. The field of host-microbe interactions is an emerging field as researchers find ways to exploit these interactions to help mankind. Currently, several laboratories on campus conduct research on host-microbe interactions. Therefore, this class provides an opportunity for the graduate students from these labs to interact and learn about the emerging themes in this area of study. The critical thinking exercises and the hands-on activities are designed to help the students develop ideas about their own research projects.