

**Department of Environmental Health Science  
College of Public Health  
University of Georgia**

**EHSC 4310 (4310L)/6310 (6310L)  
Environmental Microbiology  
Maymester 2008 Syllabus**

**Course Information**

Instructor: Erin Lipp  
Office Location: Room 144, EHS Bldg  
Phone: 706 583 8138  
Email: elipp@uga.edu  
Office Hours: by appointment (please e-mail)

**Course Meeting Time and Location**

Building: Environmental Health Science  
Room: 101 (Lecture); 120 (Lab)  
Day:  
Time:

**Textbooks and Other Required Course Material**

Lecture: *Environmental Microbiology* by Maier, Pepper and Gerba  
\*highly recommended\*

Lab: Lab notebook with duplicate (i.e., carbon copy) pages  
\*required\*

Lab manual will be posted on WebCT (use your MyUGA login to access).

Supplemental material will be assigned periodically

Other course information will be posted on WebCT. Check often for updates, etc.

**Course Description**

Types of microorganisms in the environment; effect of environmental conditions on microbial existence; public health aspects of environmental microbiology; applications of microorganisms to solve environmental problems.

Required Prerequisites:  
MIBO 3000-3000L or MIBO 3500

## Course Learning Objectives

Students will be exposed to the basic and applied study of microorganisms in their environment. At the successful completion of this course students will be able to:

- Describe the nature of environmental habitats for different groups of microbes
- Define the role of the microbial community in biogeochemical cycles and how this affects and is affected by human activities
- Recognize the role of the environment in infectious diseases
- Be familiar with the wide range of tools and methodologies used to study microbes in the environment and their activities

## Course Requirements for Grading Purposes

Exams (400 pts): There will be 2 midterm exams and 1 cumulative final exam – each worth 200 pts (see course schedule for specific dates). Final grades will be based on the two highest exam scores (i.e., you will drop the lowest score, this also means that if you are happy with your score after the two mid-terms you do not need to take the final).

Lab (100 pts): Your lab grade will be based on notebooks, quizzes and formal lab reports; total possible lab score is 100 pts (see supplemental lab syllabus for breakdown of lab grades and due dates).

Discussion (50 pts): Active participation is required for discussion of current peer-reviewed literature papers. Graduate students will lead discussions but ALL students are expected to participate.

## Topical Outline

Topics covered include:

Foundations of microbiology and microbial environments

Soil, Air, Water

Methods in Environmental Microbiology

Sampling, Microscopy, Culture, Physiology, Immunology and Genetics

Ecological Microbiology

Biogeochemical cycles, biodegradation and remediation, agriculture

Pathogens and Public Health

Environmental pathogens, indicator concept, water quality and treatment, risk assessment

## Grading Policy

See “Course Requirements” for breakdown of points between exams, labs and discussion.

A	511 – 550 pts ( $\geq 93\%$ )
A -	495 – 510 pts (90 – 92%)
B +	478 – 494 pts (87 – 89%)
B	456 – 477 pts (83 – 86%)
B -	440 – 455 pts (80 – 82%)
C +	423 – 439 pts (77 – 79%)
C	401 – 422 pts (73 – 76%)
C -	385 – 400 pts (70 – 72%)
D	330 – 384 pts (60 – 79%)
F	<330 pts (<60%)

## Make-Up Policy

There will be no make up exams. A missed exam can be your dropped score.

## Attendance Policy

*Lecture:* Attendance will be taken periodically and will help to determine grades in borderline situations. Attendance and participation is required for student-led discussions of current literature (15 points will be deducted from you total course points for any unexcused absence or lateness >15 minutes).

*Lab:* Attendance is expected for lab sessions. 5 pop quizzes will be given; you may drop one quiz score. For each unexcused absence, 15 points will be deducted from your final class score. Please note that excessive tardiness (>10 minutes) will count as an absence. Also, note that labs may periodically start early; notice will be given in class.

## University Honor Code and Academic Honesty Policy

*All academic work must meet the standards contained in “A Culture of Honesty.” All students are responsible to inform themselves about those standards before performing any academic work.*

A link to more detailed information about academic honesty can be found at:

<http://www.uga.edu/ovpi/honesty/acadhon.htm>

Additionally, while students will work in groups in the lab, ALL submitted work (lab notebooks, quizzes, lab reports, etc.) is expected to be your OWN. Exact duplication between group members is not permitted. Fully referenced lab reports are also expected; see instructor if you are unclear as to what constitutes plagiarism.

### **Students with Disabilities**

Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact the instructor or designate during regular office hours or by appointment.

### **General Disclaimers**

*The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.*