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

EHSC (MIBO) 4310 (4310L)
Environmental Microbiology
Spring 2021 Syllabus

Course Information

Instructor:	Dr. Erin Lipp
Office Location:	Room 142 /144 EHS Bldg
Phone:	706 583 8138 (Lipp)
Email:	elipp@uga.edu
Office Hours:	by appointment (please e-mail)
TA:	William Norfolk (william.norfolk@uga.edu)
Office Hours:	by appointment (e-mail)

Course Meeting Time and Location

Building:	Environmental Health Science
Rooms:	101 (Lecture); 120 and on-line (Lab)
Days:	T/Th (lecture); W (lab)
Times:	9:35 am – 10:50 am (lecture); 1:25 – 4:25 pm (lab – on hybrid schedule, see lab schedule for details)

Textbooks and Other Required Course Material

Lecture: *Environmental Microbiology* by Maier, Pepper and Gerba (3rd edition, preferred; a digital version should be available through the bookstore, older editions are also OK)

Lab: Lab notebook (quad ruled preferred)
required

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

Supplemental material will be assigned periodically

Other course information will be posted on eLC or e-mailed directly. 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

There are a total of 610 points available for this course.

Lecture (410 pts):

Exams (400 pts): There will be 4 midterm exams and 1 cumulative final exam – each worth 100 pts (see course schedule for specific dates). Final grades will be based on the four highest exam scores (i.e., you will drop the lowest score; this also means that if you are happy with your score after the four mid-terms you do not need to take the final). Exams include a combination of multiple choice, short answer and extended essay questions.

Discussion (10 pts). In class participation. Specifically, active participation in discussion of primary literature and submission of 1 paragraph reaction paper and written list of 5 questions about each paper (due before discussion session).

Lab (200 pts):

Lab notebooks/participation (30 pts)
Quizzes (30 pts; 10 pts x 3)
Lab reports and discussion assignments (140 pts)

Topical Outline

Topics covered include:

Foundations of microbiology and microbial environments

Soil, Air, Water, Extreme environments and transport

Methods in Environmental Microbiology

Microscopy, Culture, Physiology, Immunology and Molecular detection, 'Omics

Ecological and Applied Microbiology

Biogeochemical cycles and bacterial communities, microbial transport, water treatment

Public Health Microbiology

Environmental pathogens, global change, risk assessment

Grading Policy

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

A	>567 pts (≥ 93%)
A -	549 - 566 pts (90 – 92%)
B +	530 - 548 pts (87 – 89%)
B	506 - 529 pts (83 – 86%)
B -	488 - 505 pts (80 – 82%)
C +	469 - 487 pts (77 – 79%)
C	445 - 468 pts (73 – 76%)
C -	427 - 444 pts (70 – 72%)
D	366 - 426 pts (60 – 69%)
F	<365 pts (<60%)

Make-Up Policy

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

Attendance Policy

Lecture: This class is planned to be in person but if you need to be off campus please let instructor know and zoom or recorded options will be available. Participation is expected for discussion assignments – either virtually or in-person.

Lab: To maintain appropriate distancing the labs will be divided into 4 sections (no more than 4 students each); you will be assigned to a section following drop/add and you will have a schedule for in person and on-line work.

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.

Competencies Covered in this Class for the BS Degree in Environmental Health

Students will have a foundation in the natural and physical sciences, at a minimum to include courses in biology, organic chemistry, physics, and microbiology

Students will have in-depth knowledge in four prescribed technical areas in environmental health. Prescribed areas include air quality, water quality, environmental epidemiology, global environmental health, environmental microbiology, food protection, hazardous waste management, industrial hygiene, and water and soil quality.

COVID-19 information for students

Face Coverings

As a reminder, the University of Georgia—along with all University System of Georgia (USG) institutions—requires all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at https://drc.uga.edu/.

DawgCheck

Please perform a quick symptom check each weekday on DawgCheck—on the UGA app or website—whether you feel sick or not. It will help health providers monitor the health situation on campus: https://dawgcheck.uga.edu/

What do I do if I have symptoms?

Students showing symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies.

What do I do if I test positive?

Any student with a positive COVID-19 test is **required** to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.

What do I do if I am notified that I have been exposed?

Revised Guidelines for COVID-19 Quarantine Period
Effective Jan. 4, 2021, students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for **10 days** (consistent with updated Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines). Those quarantining for 10 days must have been symptom-free throughout the monitoring period. Please correspond with your instructor via email, with a cc: to Student Care & Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined.

We strongly encourage students to voluntarily take a COVID-19 test within 48 hours of the end of the 10-day quarantine period (test to be administered between days 8 and 10). Students may obtain these tests at Legion Field (https://clia.vetview.vet.uga.edu/) or at the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in the University Health Center without an appointment. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies

If the test is negative, the individual may return to campus, but MUST continue to closely monitor for any new COVID-19 symptoms through 14 days. DawgCheck is the best method for monitoring these symptoms. If new symptoms occur, the individual must not come to campus and must seek further testing/evaluation.

If the test is positive at the end of the 10-day period, the individual must begin a 10-day isolation period from the date of the test.

How do I participate in surveillance testing if I have NO symptoms?

We strongly encourage you to take advantage of the expanded surveillance testing that is being offered from **January 4 – 22: up to 1,500 free tests per day at Legion Field and pop-up locations.** Testing at Legion Field can be scheduled at https://clia.vetview.vet.uga.edu/. Walk-up appointments can usually be accommodated at Legion Field, and pop-up saliva testing does not require pre-registration. For planning purposes, precise sites and schedules for the pop-up clinics are published on the UHC's website and its social media as they are secured: https://www.uhs.uga.edu/healthtopics/covid-surveillance-testing.