

# Introduction to Microbiology MIBO 3500

A study of microorganisms, with special emphasis on bacteria, their structure, function, diversity, and importance to humans

## Instructor



Jennifer R. Walker, Ph.D.

**Email:** [mibo3500@uga.edu](mailto:mibo3500@uga.edu)

**Office hours:** Tuesdays and Thursdays by selecting a time through the website

<https://mibo-drwalker.youcanbook.me/> if an alternate time is needed, please email

**Office:** Room 327A, Biological Sciences Building

## Course information and learning objectives

**Textbook:** *Microbiology, An Evolving Science* by [Joan L. Slonczewski](#) and [John W. Foster](#), Fifth Edition, ISBN: 978-0-393-42865-0

Students are encouraged to purchase/rent a physical copy (hardbound, binder) or select an ebook version. Course material will be based on the 5th edition of this textbook. Please do not use an older edition as terms have changed in the textbook.

Copies of the textbook are available to use on campus in Biological Sciences, room 327.

**Discussion platform:** Packback.co is an online discussion board that will be utilized throughout the semester. The fee for registration is \$29.00. Register as a new student if you don't have an account already and select the MIBO 3500 Walker course. If you already used Packback for a previous course, you will receive a discount for this semester.

Instructions and access links will be provided on eLC for the Packback discussion board.

**Prerequisites:** (CHEM 2211 or CHEM 2311H or CHEM 2411) and (CHEM 2211L or CHEM 2311L or CHEM 2411L) and BIOL 1107 or BIOL 1107E or BIOL 2107H

**Attendance** As per UGA policy for Fall 2021, we are meeting IN PERSON, Tuesdays and Thursdays.

Whether or not you are vaccinated, in light of the Delta variant, I encourage you to wear your mask to class. HEPA filters are installed in classrooms as well to help with air quality. I will be wearing my mask during class and in-person office hours for the time being. All quizzes, exams and assignments will be done during class time. Makeups for any missed in-class activities, quizzes or exams will be only given for excused absences such as documented illness, family emergencies and academic activities.

**Accommodations:** Students with a disability or health-related issue who need class accommodations should make an appointment with Dr. Walker as soon as possible. Please email, [jrswalk@uga.edu](mailto:jrswalk@uga.edu) or call phone, 706-201-5695 for specific requests.

**Learning goals:**

To explore the physiology, biochemistry and genetics of bacteria including cell structure, function, diversity, metabolism and genetic evolution.

To examine the taxonomic, ecological and genetic relationships among microorganisms including microbial diversity and the biotechnological application of microorganisms to solve environmental problems.

To analyze viral structure, replication mechanisms and influence on human health with a broad overview of human immunology and microbial disease.

**Technology:**

- 1) Each student must have access to a computer that has reliable Internet in order to access the course eLC website.
- 2) Web browser (of choice) must be compatible for viewing videos, accessing assigned PDF resources, Power Point, etc.

**Topical Outline**

In general, Tuesdays are reserved for highlighting key concepts from the assigned reading. Thursdays are application of course material through quizzes, group activities, guest speakers and in-class papers.

The course schedule is broadly outlined as follows:

Unit 1 – Microbial Cell Observation, Structure and Function; Bacterial Growth Conditions and Control; Bacterial Genomes and Chromosomes

Unit 2 – Central Dogma for Prokaryotes; Gene Regulation and Evolution; Bacterial Metabolism and Industrial Application

Unit 3 – Virology, Immunology, Microbial Pathogenesis and Disease

For a detailed schedule, please see Course Schedule on the course eLC.

**Due dates and feedback**

*All due dates/times are listed in the schedule are final.* Assignments, exams or activities turned in after the due date/time **WILL NOT** be accepted and be scored as a zero. As a courtesy, all assignment/activity due dates and exam dates are listed on the course schedule document in Unit 0 on eLC.

Group activities and exam grades and feedback will be returned within seven (7) days.

If you believe there was an error in grading on an exam, homework assignment, or activity please alert Dr. Walker within **3 DAYS** (not including weekends) after grade posting. The potential error will be reviewed and response provided as quickly as possible. Submit via email (to [mibo3500@uga.edu](mailto:mibo3500@uga.edu)) or in writing the question number and the error **with supporting evidence** from textbook or lecture notes providing the correct information. A regrade request form is supplied under Unit 0.

## Communication and Class Requirements

Students are expected to check the eLC announcement widget daily for course announcements - this is the preferred communication with all students rather than mass email. It is suggested that students subscribe to receive automatic email alerts when a news item is posted.

For personal issues/concerns, students should communicate with Dr. Walker via the UGA email: [mibo3500@uga.edu](mailto:mibo3500@uga.edu). Students should expect response to emails within 24 hrs on weekdays. Emails sent after 4:30 pm ESD on Fridays may not have a response until the following Monday after 8 am ESD.

## Course point breakdown

520 points are available for the course. eLC's gradebook will be used for official grade calculations.

In-class Group Activity (5): (20 pts each)	100 pts
Concept Check (6): (20 points each- lowest dropped)	120 pts
Packback discussion posts:	80 pts
Midterm:	100 pts
Cumulative Final Exam:	<u>100 pts</u>
	500 pts

## Group activities, Concept Checks, and Packback

**In-class group activities:** At the beginning of the semester, students are arranged into groups of three. Group activities are worth 20 points each. Students will collaborate within groups during designated class sessions to create a consensus of answers to the group activity questions based on discussions in class. At midpoint and end of the semester group members will evaluate other members. If a group member receives an unsatisfactory rating from all fellow group members at group evaluation, the final group activity score for that member can be reduced by 50%.

**Concept Checks:** Concept checks will reflect the week's topics and assigned reading and will consist of 12 questions maximum to be answered individually in class on selected Thursdays. Learning objectives provided for each chapter will guide students as to what will be asked. The lowest Concept Check score will be dropped from final grade calculation ***if all concept checks have been taken***. Concept Checks with a zero and no excused absence will be substituted as the next lowest Concept Check grade calculated in the final grade calculation.

**Packback:** Each week the Packback discussion board is used to explore topics that apply more personally and in deeper detail. The Packback discussion board requires students to post a question by Wednesday and reply to two posts by Friday each week (with the exception of academic holidays). Posts and answers must be specific, content related open-ended questions and fully explained responses with sources cited. The Help Section of Packback.co provides more detail. Scoring begins with 80 points at the start of the semester. **Each week a post or two replies that are not submitted results in 4 points deducted for no question and 2 points deducted for each omitted response from the 80 points.**

## Exams

There is one midterm and one cumulative final exam – both will be given in person during class. Learning objectives provided for each unit will guide students as to what will be on exams. Both exams are to be taken individually with without assistance as stated in the UGA honest policy. Unexcused absences for exams will result in a zero.

## Letter grade assignment

Your final course percentage and letter grade will be calculated by this formula:  $[(\text{Total points})/500] \times 100 = \text{Course percentage}$

### **LETTER GRADE ASSIGNMENTS WILL BE MADE ACCORDING TO THE FOLLOWING SCALE:**

A = (4.0) = 92.45-100%	A- = (3.7) = 89.45 – 92.44%	D = (1.0) = 59.45 – 69.44%
B+ = (3.3) = 86.45– 89.44%	B = (3.0) = 82.45 – 86.44%	F = (0.0) = 59.44% OR BELOW
B- = (2.7) = 79.45 – 82.44%	C+ = (2.3) = 76.45 – 79.44%	
C = (2.0) = 72.45– 76.44%	C- = (1.7) = 69.45 – 72.44%	

## Academic Honesty, Mental Health, and COVID news for Fall 2021

*UGA Student Honor Code: "I will be academically honest in all of my academic work and will not tolerate academic dishonesty of others." A Culture of Honesty, the University's policy and procedures for handling cases of suspected dishonesty, can be found at [www.honesty.uga.edu](http://www.honesty.uga.edu).*

Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. As instructor, it is my responsibility to uphold the University's academic honesty policy and report my belief of dishonesty to the Office of the Vice President for Instruction so that a facilitated discussion can be initiated to resolve the matter.

### **Mental Health and Wellness Resources:**

- If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.
- UGA has several resources for a student seeking mental health services (<https://www.uhs.uga.edu/bewelluga/bewelluga>) or crisis support (<https://www.uhs.uga.edu/info/emergencies>).
- If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.
- Additional resources can be accessed through the UGA App.

### **Coronavirus Information for Students, Fall 2021 News for Students:**

The University strongly encourages all faculty, staff and students to be vaccinated. However, based on USG guidance, the University cannot require students, faculty or staff to be vaccinated in order to be on campus.

Faculty, staff and students can schedule an appointment directly with the University Health center to get vaccinated and receive a limited edition t-shirt PLUS a \$20 local gift card of choice, courtesy of the President's Venture Fund. While supplies last, options include gift cards to the UGA Bookstore, Starbucks, Chick-fil-A, Fully Loaded and El Barrio. Getting your vaccine is fast, easy and at no cost to you.

The University System of Georgia encourages everyone—whether vaccinated or not—to wear a face covering while inside campus facilities. However, face coverings and social distancing are not required.

Any students who want face coverings can pick them up at no cost at Information Desks in the Tate Student Center and the Miller Learning Center.

Pursuant to state and University System of Georgia (USG) rules, we cannot ask our students or fellow employees for proof of their vaccination status, and we should not treat vaccinated and unvaccinated individuals differently unless dictated by law or applicable guidance. In addition, students should not be asked about their vaccine status and segregated in a classroom or from other instructor-student interactions (e.g., office hours, group work, field trips, labs, etc.) based on their vaccination status.

However, students may be required by off-campus partnering organizations to wear masks and/or be vaccinated as a condition of participation in experiential learning opportunities such as study abroad programs, externships and delivery of medical services.

Any faculty, staff or student who tests positive for COVID-19 is still REQUIRED to report their positive test through the [online portal](#) and follow the guidance provided. The UGA community may also consult DawgCheck for guidance if they are experiencing COVID-19 symptoms and/or have been exposed to an individual who has tested positive for COVID-19.

UGA will continue to offer free testing for COVID-19 to all members of the UGA community at the University Health Center. Based on CDC guidance, vaccinated individuals do not need to be tested unless they are symptomatic. Appointments can be booked via the [Vet View](#) scheduling process.

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