



Environmental Biology: Molecules and Cells

Department of Environmental Science & Policy

Lecture: EVPP 210-001 (CRN 15553)

Spring 2026, MW 10:30-11:45 am

West Building, Room 1004



Lecture Instructor:

Name: Dr. Esther Peters

Office: David King Hall (DKH), Room 3050

Email: epeters2@gmu.edu, Office Phone: 703-993-3462, Cell Phone: 703-624-0143

Office Hours: Wednesdays, 12:00–1:00 PM, or by Appointment (Send e-mail to schedule)

Format: F2F

Lab Sections:

Instructor: Tara Snedgen

Office Hours: Mondays, 9:15–10:15 AM,

Email: tsnedgen@gmu.edu

or by Appointment (Send e-mail to Tara

Lab Location: DKH 3021

to schedule)

Format: F2F

Sign up for Mason Alert (e.g., weather closings, emergencies) at <https://alert.gmu.edu>

See Emergency Preparedness Guides at [READY.GMU.EDU](https://ready.gmu.edu)

***Please note that the syllabus may need to be changed after the start of the semester. Check your GMU e-mails and Canvas announcements frequently and respond to requests!**

Required Materials:

Textbook (Free!): <https://openstax.org/details/books/biology-2e>, access in Canvas

Laboratory Manual: *Cell Biology: A Laboratory Manual* (In GMU Bookstore, Required)

Download Honorlock on your laptop for taking exams (see page 5)

Course Description:

The goal of this course is to give students core knowledge of molecular and cellular biology that is critical for understanding the relationship between living organisms and their environment. Much of the biology encountered in upper-level environmental science courses at GMU will be based on information from this class. The basic principles will be taught by lectures listed below and will be based on material in the textbook. Lecture material will be presented with PowerPoint and may contain some material not found in the textbook. The lecture schedule is subject to change based on progress. Questions or comments to the instructor are encouraged in class. I may communicate with students by email so every student must have an active GMU email account. Please note that lecture and laboratory are linked (grade is based on performance in both), so they must be taken concurrently and require similar levels of understanding about the key concepts of environmental biology. The lecture section will highlight each week's reading and study assignments; the laboratory section will provide further explanation and experimental investigations of key concepts. You may record the lectures **AND TAKE NOTES**.

Course Organization:

You will take three lecture exams covering specific sections of the material during the semester and a cumulative final exam during the scheduled final examination period (see

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Dr. Peters if you have more than two final exams scheduled on the same day). All exams are multiple choice worth 100 points each. One lowest exam score will be dropped (NOT THE FINAL). *The purpose of the dropped exam is to offset bad days, flat tires, or other unexpected absences.* If you must miss an exam due to illness, please contact Dr. Peters by email PRIOR TO the exam and send her a note from a medical professional before you return to class. The missed exam will be rescheduled for you to take as soon as possible.

Six case studies will be completed in groups during class time. Each case study will count for 10 points. The lowest case study grade will be dropped. This is to account for unforeseen absences. There are no makeups and case studies cannot be completed at home or outside of class time (unless permission is given by Dr. Peters). Information from these case studies could show up on the exam.

The calendar of religious holidays and observations is posted here (<https://ulife.gmu.edu/religious-holiday-calendar/>). Please let Dr. Peters know in advance if any religious observances affect your participation in class activities and assignments.

GMU's Office of Disability Services (ODS) provides equitable access to learning. If you need academic accommodation for a disability, go to <https://ds.gmu.edu/>. Then discuss your approved accommodation with Dr. Peters. Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu | Phone: (703) 993-2474.

If you develop a prolonged physical illness or mental health issue or are dealing with circumstances that may require class absences (e.g., participation on a Mason sports team, death of a family member, or any other reason), please contact Dr. Peters immediately so she can discuss other options with you and get you the help you need.

Course Preparation:

"He who hesitates is lost...." Reading, research, and assignments are detailed on the following class schedule. Any concerns about keeping up with assignments should be discussed with Dr. Peters. More students are juggling work, research, internships, shadowing, families, and illnesses. Please note that employment must not take priority over academic responsibilities. Students employed more than 20 hours a week are strongly urged not to attempt a full-time academic load. Students employed more than 40 hours a week should attempt no more than 6 credits per semester. Please consider your responsibilities and interests and plan accordingly to protect your health and GPA!

Course Policies:

Value learning, act with integrity (Cheating Has Become Normal, *The Chronicle of Higher Education*, <https://www.chronicle.com/article/cheating-has-become-normal>). AI is not authorized for use in this course, with the exception of studying, to clarify concepts or understand definitions, or organize information to help you learn the material. What you need to know is provided in the lectures, labs, PowerPoint slides, and assigned readings in the textbook, case studies, and lab exercises. All students are expected to maintain the GMU honor code by practicing ethical behavior and submitting original work. To assist another student's unethical behavior is also a violation of the honor code. Remember, the honor code protects your hard work and the value of your degree from GMU. Please turn off cell phones or pagers before class begins. If using electronic devices (such as phones, laptops, tablets), please be respectful of your peers and your instructor and do not

engage in activities that are unrelated to class. Unless otherwise noted by the instructor prior to the exam, these assessments will be taken without study aids, memoranda, textbooks, other books, data, or other information available. The purpose of these assessments is to evaluate the student's progress in understanding the material. There should be nothing on your desk except a pencil and a bottle of water when taking exams.

Email:

Students are required to use their GMU email accounts for all class-related communications. Students are encouraged to have a professional email signature. Please check your email often and respond to queries from Dr. Peters. If you have questions about the content for a class that you missed, please contact your classmates and be sure to identify the course number in course emails. You can also click on the Inbox icon in Canvas to send email to the instructor or classmates. If you are not getting messages, send Dr. Peters an alternate email address. Dr. Peters will send updates on how to continue learning by email and post the information on Canvas if the campus is closed. Please seek help well before an exam or assignment is due. Student communication of e-mail information (Opt-in Form): <https://provapps.gmu.edu/OptInApp/Default.aspx>

Name and Pronoun Use:

If you wish, please share your name and gender pronouns with me and indicate how best to address you in class and via email. I use she/her for myself, and you may address me as "Dr. Peters" in email and verbally.

Sexual Harassment, Sexual Misconduct, and Interpersonal Violence:

George Mason University is committed to providing a learning, living, and working environment that is free from discrimination and a campus that is free of sexual misconduct and other acts of interpersonal violence to promote community well-being and student success. We encourage students who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support. University Policy 1202: Sexual Harassment and Misconduct speaks to the specifics of Mason's process, the resources, and the options available to students. As a faculty member and designated "Responsible Employee," I am required to report all disclosures of sexual assault, interpersonal violence, and stalking to Mason's Title IX Coordinator per university policy 1412. If you wish to speak with someone confidentially, please contact the Student Support and Advocacy Center (703-380-1434) or Counseling and Psychological Services (703-993-2380). You may also seek assistance from Mason's Title IX Coordinator (703-993-8730; titleix@gmu.edu).

Other Useful Campus Resources:

Such as the University Writing Center, Learning Center, Libraries, Counseling and Psychological Services. Please go to: <https://stearnscenter.gmu.edu/knowledge-center/knowning-mason-students/student-support-resources-on-campus/> and click on the one you need for the most up-to-date information!

TIMELYCARE: Mason students now have FREE access to TimelyCare – a virtual mental health and well-being platform crafted specifically for college students, providing a multitude of virtual mental health and well-being resources available 24/7. Find out more about the resources available online at <https://ulife.gmu.edu/timely-care/>; you can also download the app from that webpage.

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Course Grading:

Three lecture exams*	100 points each
Cumulative final	100 points
Six Case Studies*	50 points
Lecture total	70 percent of grade
Laboratory total	30 percent of grade

*Lowest score dropped

Number Grade	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
70-76	C
60-70	D
<60	F
A CURVE WILL NOT BE APPLIED	

Schedule of Lectures*:

See also Academic Calendar

(https://registrar.gmu.edu/calendars/spring_2026/)

Week	Days	Read Before Class	Topic
1	January 21	Chapter 1	Course Introduction (Lecture 0)
2	January 26	Chapter 1	The Scientific Method (Lecture 1)
	January 28	Chapter 1	What is Life? (Lecture 2)
3	February 2		<i>Case Study 1: Disappearing Marine Iguanas</i>
	February 4	Chapter 2	Small Molecules (Lecture 3)
4	February 9	Chapter 3 (3.1-3.4)	Macromolecules: Proteins, Carbohydrates, and Lipids (Lecture 4)
	February 11		<i>Case Study 2: Curly and Straight Hair</i>
5	February 16		Review Session
	February 18		Exam 1
6	February 23	Chapter 6	Energy, Enzymes, and Metabolism (Lecture 5)
	February 25	Chapter 4	Cells (Lecture 6)
7	March 2	Chapter 4	Cells (Lecture 6)
	March 4	Chapter 5	Cell Membranes (Lecture 7)
8	March 9		Spring Break – No Classes
	March 11		
9	March 16		<i>Case Study 3: Cell Membranes</i>
	March 18	Chapter 9	Cell Signaling (Lecture 8)
10	March 23		<i>Case Study 4: Cell Signaling</i>
	March 25		Review Session
11	March 30		Exam 2
	April 1	Chapter 3.5	Nucleic Acids (Lecture 9)
12	April 6	Chapter 7	Respiration: Pathways that Harvest Energy (Lecture 10)
	April 8		<i>Case Study 5: Cell Respiration</i>
13	April 13	Chapter 8	Photosynthesis (Lecture 11)
	April 15		<i>Case Study 6: Killing Chloroplasts</i>
14	April 20	Chapter 15	From DNA to Protein (Lecture 12)
	April 22		Review Session
15	April 27		Exam 3
	April 29	Chapters 10 and 11	The Cell Cycle and Cell Division (Lecture 13) and Course Evaluation Completion
16	May 4		Last Day of Class, STUDY FOR FINAL EXAM
	May 6		Final Exam (10:30-1:15 PM)

Green = 200-level courses student evaluations **Yellow** = Withdrawal period (2/11-3/30)

Honorlock Requirement:

This course requires the use of Honorlock, in Canvas, for online exams. The extension must be installed on your **Google Chrome** browser. Read this information to get a basic understanding of Honorlock:

<https://honorlock.kb.help/honorlock-application-test-taker-experience/>

Download Instructions

Download and install Honorlock from this link:

<https://honorlock.kb.help/install-the-honorlock-extension/>

Read this: <https://honorlock.kb.help/how-to-use-honorlock-test-takers/>

And read this: <https://honorlock.kb.help/honorlock-best-practices-for-test-takers/>

Once Installed;

- Log into Canvas through **Google Chrome**; run system and browser checks
- Navigate to the exam (Try the Practice Exam first!)
- Complete ID verification (see instructions here <https://honorlock.kb.help/how-to-complete-id-verification/>, you may keep your Smart phone with you to do this)

Start Honorlock and navigate back to the exam to continue. Honorlock will use permissions to identify the exam URL and make screen recordings while you are taking the exam (the student must allow this activity for each exam taken). See <https://honorlock.kb.help/honorlock-extension-permissions-and-functions/>. You may uninstall Honorlock at the end of each exam but must reinstall it before the next exam. More information is provided in links to other resources at the bottom of that webpage.

When taking an online exam follow these guidelines:

- You may take the exam in any quiet, private space (home or dorm room, Disability Testing Center, classroom)
- Turn off all mobile devices, phones, etc., and don't have them within reach
- Clear your area of all materials - books, papers, other computers, or devices
- Remain at your desk or workstation for the duration of the test
- Honorlock will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted
- When you have finished the test, submit it (see this for more information: <https://honorlock.kb.help/end-of-exam-procedures/>)

Getting Help

Several resources are available if you encounter problems with Honorlock, see: <https://honorlock.kb.help/test-taker-resources/>.

IF YOU HAVE A PROBLEM ACCESSING THE EXAM CALL DR. PETERS (703-634-0143)! If you call and can't get through, please state your name and leave a message so I can call you. Texts and emails will not be answered.