

Environmental Biology: Molecules and Cells

Department of Environmental Science & Policy

Lecture: EVPP 210-001 (CRN 71447)

Fall 2025, Monday/Wednesday 9:00–10:15 AM

Nguyen Engineering Building, Room 1110

Lecture: EVPP 210-002 (CRN 71448)

Fall 2025, Monday/Wednesday 1:30–2:45 PM

Enterprise Hall, Room 277

Lecture Instructor:

Name: Dr. Esther Peters

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

Office Hours: Wednesdays, 3:00–4:00 PM, or by Appointment (Send e-mail to schedule)

Format: F2F

Lab Sections:

Instructor: Tara Snedgen

Email: tsnedgen@gmu.edu

Lab Location: DKH 3021

Format: F2F

Office Hours: Mondays, 3:00–4:00 PM,

or by Appointment (Send e-mail to schedule)

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>

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

Access your course materials on Canvas at <https://mymasonportal.gmu.edu>

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

Lectures will not be recorded, you may record the lectures AND TAKE NOTES

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.

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 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 scheduled class times. Each case study will count for 10 pts. The lowest case study grade will be dropped. This is to account for unforeseen absences. There is no makeup and case studies cannot be completed at home or outside of class time unless permission is given by Dr. Peters.

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, 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. If you are not getting messages, send Dr. Peters an alternate email address. Click on the Inbox icon in Canvas to send email to the instructor or classmates. 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 for college students, providing a multitude of virtual mental health and well-being resources available 24/7. Find out more at <https://ulife.gmu.edu/timely-care/>; you can also download the app from that webpage.

EVPP210

Course Grading:

Three lecture exams*	+100 points each
Cumulative final	+100 points
Six Case Studies*	+50 points
Lecture total	350 points
Laboratory total	+150 points
Course total	500 points

*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/fall_2025/)

Week	Days	Topic
1	August 25	Course Introduction (Lecture 0, Chapter 1)
	August 27	The Scientific Method (Lecture 1, Chapter 1)
2	September 1	NO CLASS (LABOR DAY HOLIDAY)
	September 3	What is Life? (Lecture 2, Chapter 1)
3	September 8	<i>Case Study 1: Disappearing Marine Iguanas</i>
	September 10	Small Molecules (Lecture 3, Chapter 2)
4	September 15	Macromolecules: Proteins, Carbohydrates,
	September 17	and Lipids (Lecture 4, Chapter 3, 3.1-3.4)
5	September 22	<i>Case Study 2: Curly and Straight Hair</i>
	September 24	Review Session
6	September 29	Exam 1
	October 1	Energy, Enzymes, and Metabolism (Lecture 5, Chapter 6)
7	October 6	Cells (Lecture 6, Chapter 4)
	October 8	Cells and Cell Membranes (Lectures 6,7, Chapter 5)
8	October 13	NO CLASS (FALL HOLIDAY)
	October 15	<i>Case Study 3: Cell Membranes</i>
9	October 20	Cell Signaling (Lecture 8, Chapter 9)
	October 22	<i>Case Study 4: Cell Signaling</i>
10	October 27	Review Session
	October 29	Exam 2
11	November 3	Nucleic Acids (Lecture 9, Chapter 3.5)
	November 5	Respiration: Pathways that Harvest Energy (Lecture 10, Chapter 7)
12	November 10	<i>Case Study 5: Cell Respiration</i>
	November 12	Photosynthesis (Lecture 11, Chapter 8)
13	November 17	<i>Case Study 6: Killing Chloroplasts</i>
	November 19	From DNA to Protein (Lecture 12, Chapter 15)
14	November 24	Review Session
	November 26	NO CLASS (THANKSGIVING HOLIDAY)
15	December 1	NO CLASS (STUDY for EXAM 3)
	December 3	Exam 3
16	December 8	The Cell Cycle and Cell Division (Lecture 13, Chapters 10, 11) and Course Evaluation Completion
	December 10 December 15	002 – Final Exam (1:30-4:15 P.M.) 001 - Final Exam (7:30-10:15 A.M.)

Green = 200-level courses student evaluations

Yellow = Withdrawal period

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 leave a message and your call will be returned.