

George Mason University
College of Science

EVPP 109: Introduction to Environmental Science I (Ecosphere I) Lab

Fall 2025 – 1 credit

Note: EVPP 108 is a separate course and has a separate syllabus, available on its respective Canvas course page.

Instructor and Lab Section Information

<i>Section</i>	<i>Instructor</i>	<i>Email</i>	<i>Day and Time</i>	<i>Location</i>
201	Jacob Mormando	jmormand@gmu.edu	T 10:30 AM – 1:10 PM	David King Hall (DK) Rm #3044 (all sections)
202	Nicole Firing	mfiring@gmu.edu	M 10:30 AM – 1:10 PM	
203	Nicole Firing	mfiring@gmu.edu	M 1:30 PM – 4:10 PM	
204	Jacob Mormando	jmormand@gmu.edu	T 1:30 PM – 4:10 PM	
205	Nicole Firing	mfiring@gmu.edu	W 10:30 AM – 1:10 PM	

Instructor Office Hours

202, 203, 205	Nicole Firing, mfiring@gmu.edu	By appointment – Zoom (email)
201, 204	Jacob Mormando, jmormand@gmu.edu	By appointment – Zoom (email)
All	Stephanie Schmidt, sschmi11@gmu.edu	Book here

Course Description and Mason Core

This course introduces students to the components and interactions making up Earth's environmental systems. It teaches basic concepts in biological, chemical, physical, and earth sciences in an integrated format, primarily lab and field exercises, that complement EVPP 108. **When taken with EVPP 108, EVPP 109 fulfills the Mason Core 4-credit Natural Science with lab requirement;** see more [here](#).

Course Objectives

As a Mason Core Natural Sciences course, students will engage in scientific exploration; foster their curiosity; gain enthusiasm for science; and apply scientific knowledge and reasoning to personal, professional, and public decision-making. In particular, students will be challenged to more fully:

1. Understand how scientific inquiry is based on investigation of evidence from the natural world, and that scientific knowledge and understanding: a) evolves based on new evidence, and b) differs from personal and cultural beliefs;
2. Recognize the scope and limits of science;
3. Recognize and articulate the relationship between the natural sciences and society and the application of science to societal challenges (e.g., health, conservation, sustainability, energy, natural disasters, etc.);
4. Evaluate scientific information (e.g., distinguish primary and secondary sources, assess credibility and validity of information);
5. **Participate in scientific inquiry and communicate the elements of the process, including (i) making careful and systematic observations; (ii) developing and testing a hypothesis; (iii) analyzing evidence; and (iv) interpreting results.**

Lab Overview and Expectations

Lab Activities

In-class lab activities will focus on indoor and outdoor **lab/field exercises (i.e., labs)** completed in groups and requiring full participation. Activities complementing labs include **Kahoot**; **pre-lab lectures and discussions**; completion of **data sheets** and **scientific process** sheets; and other written or oral participation assignments, such as a hand-written scientific poster.

These activities may require you to interact with chemicals, mud, organisms, and the outdoors. If you are not comfortable with these conditions, please obtain accommodations from Disability Services ([page 6](#)). However, please note that various course activities cannot be substituted with non-field or non-lab work.

Out-of-class lab activities will include **pre-lab reading and pre-lab quizzes on Canvas &/or from the lab manual**; a written **lab report**; and several other **short assignments** interspersed throughout the semester.

Instructors may assign other lab work to be completed outside of class, particularly during asynchronous weeks in which class will not meet in person; these weeks are 9/1 – 9/3; 10/13 – 10/15; 11/3 – 11/5; and 11/24 – 11/26.

General Course Policies/Expectations

- **Electronic Lab Manual:** Each student is required to purchase the digital and [online lab manual](#) used in ~ 75% of labs: *Environmental Science Lab Manual and Notebook – Volume 1: The Science, 3rd Edition (ISBN: 9781524953393)*, published by Kendall Hunt and authored by Dr. Kim Largen.
- **Technology:** Each student is **required to** (1) have a wifi-enabled **laptop or tablet to use during lab periods**, (2) set up and utilize the [Microsoft 365 Apps](#) like OneDrive, Forms, and Excel using your GMU account, and (3) **use Canvas** (and the associated app) to stay updated and to find readings and access/submit assignments or other materials.
- **Course Communication:** Email and Canvas will be the primary modes of correspondence; check both daily. Use of a @gmu.edu address is required. Any changes to the course schedule will be provided using email and/or Canvas. When sending questions, comments, or concerns to your instructor, use your @gmu.edu address to email your lab instructor (N. Firing or J. Mormando); optionally, “CC” Dr. Schmidt. Always use the subject line “**EVPP 109 section 20X**” where X ∈ {1, 2, 3, 4, 5}. Please note that automatic filtering of emails by your instructors may be performed; thus, failure to adhere to the above subject guidance may lead to your email not being received.
- **No Sale of Course Content and Class Privacy:** ALL class content is the property of GMU; it may not be posted online, copied into AI, used for commercial purposes, or duplicated without explicit instructor permission. Additionally, recording and/or distributing recordings of instructors or students are not permitted unless approved by the instructor.
- **Academic Honesty:** As members of the Mason community, students pledge to neither give nor receive unauthorized aid while working on/completing **any** work. See [page 6](#) for class policy.

In-Lab Policies/Expectations

- **Attendance and Excused Vs Unexcused Absences:** Participation in all class sessions, for the entirety of the lab session, is **required** for this lab class. While attendance will be quantified using Kahoot ([see page 5](#)), instructors will keep track of a student’s total number of **excused (E)** and **unexcused (U)** absences; see definitions for each below.
- **Unexcused Vs Excused Absences:** Absences may be excused only if one or more of the following is satisfied:
 - (a) A doctor’s or nurse’s note is provided before, or within 2 days after, the lab session that explicitly demonstrates the student’s inability to participate in lab **on the date in question**
 - (b) documentation of a student’s **scheduling issue (including athletics** or extracurricular activities) is provided **≥ 2 days ahead of time**, where the particular lab date requiring excused absence is specified*,**
 - (c) **unforeseen circumstances** are **documented & OK’d** by the instructor **within 2 days** of a missed lab
 - (d) a student **enrolls in the course late** and **emails the professor within 1 week of enrollment**
 - (e) It is the student’s **first** absence that would otherwise count as unexcused

*Students with >1 scheduling issue should consider enrolling in another lab section to avoid grade deductions from absences.

**Students with athletic conflicts must document each conflict separately and/or remind their instructor of conflicts.

Makeup Policy for Unexcused Vs Excused Absences:

Unexcused absences: A student with an unexcused absence will receive any in lab for: 0% for attendance, data sheets, and any scientific method work if they have an unexcused absence. **Additionally, they will not be able to earn credit for other graded items completed in lab (such as the peer review or the composting mini-poster).**

Excused absences: Once a student earns an excused absence, their attendance grade will be exempted. Other missed work will not be exempted and must be made up using the policy below:

- Students should **borrow data from groupmates** to complete the lab data sheet and must submit their data sheet on Canvas within 2 weeks of the missed lab.
- Students must individually complete the scientific process work within 2 weeks of the missed lab.
- Students can earn full credit on data sheets and scientific process work only if they also complete a separate **makeup assignment** within 2 weeks of the missed lab. See Canvas for the makeup assignment.
- If students miss the peer review or the composting mini-poster, they will also need to discuss makeup arrangements with their lab instructor before, or within 3 days of, the missed lab.

Note: Makeup work will not be accepted after Tuesday, 12/9 at 5:00 PM.

- **Attending Alternative Lab Sessions:** A student who obtains an **excused absence** from a lab date may be permitted to attend an alternative lab session in the same week without deductions on any course work and without the conflict counting toward an absence. To receive permission, first email your section's instructor; the alternate section's instructor (if different); AND Dr. Schmidt. **You must receive written confirmation from all parties to attend.**
- **Attendance and Final Grade Policy:** Independent of grades calculated per the course grading schema ([see page 4](#)), the table below indicates the maximum grade a student can earn in the course, identified as the **minimum grade associated with a student's excused and unexcused absence count, respectively** (note: attending alternative lab sessions with approval will not count as an absence). **Students with ≥ 6 total absences will earn a D or F.**

<u>Excused</u> count	Max. grade	<u>Unexcused</u> count	Max. grade	Total count	Max. grade
1	A+	1	A-	1	A+
2	A+	2	B	2	A+
3	A	3	C	3	A
4	B	4	D	4	B
5	C	5	F	5	C
6	D	6	F	6	D
7	F	7	F	7	F

*Example: J has 2 excused absences and 2 unexcused absences. Their maximum grade is the **minimum** of the grades provided above for these respective absence counts: i.e., the minimum of {A+, B, B}. Thus, their maximum grade is a B.*

- **Submission of Work:** Students are also responsible for timely submissions of assignments/ assessments in the correct format (e.g., .docx; .xlsx; on paper; etc.) and correct location (e.g., Canvas, in-class). **At all times, pages files or HEIC image files are not accepted.** More information about course work is provided on [page 5](#).
- **Late Work Policy:** No late work is accepted without an extension (see below).
- **Extension Policy:** Students wishing to obtain an **extension** on any assignment must email their instructor and receive permission, given that they also do one of the following:
 - Provide a doctor's or nurse's note of a **medical emergency** within 2 days of a missed deadline
 - Provide documentation of a **scheduling conflict** at least 2 days **BEFORE** a deadline
 - Provide documentation of **late enrollment** within 1 week of enrollment
 - Provide documentation of other **unforeseen circumstances** within 2 days of a deadline
 - **(If in-class work) receive explicit permission from the instructor before leaving lab**

Approval of requests are not guaranteed and are at the discretion of the instructor.

Note: No course work, even those for which an extension has been granted, will be accepted after 12/9 5:00 PM ET.

Other In-Lab Policies and Data Sheet Deductions:

Punctuality: Students must arrive to lab **on time** to earn an attendance grade via Kahoot and hear the pre-lab lecture. Students who arrive < 15 minutes late but after Kahoots will not receive attendance credit but can still earn credit on any aspect of scientific process logs and data collection that has not yet occurred. **Students who arrive >15 minutes after lab begins will be deemed absent (unexcused)** and will not be able to submit data sheets or data reflection work.

Cleanup and Departure: Lab clean-up, including returning of materials to their in-lab location, is required for each **group** before leaving. **Each lab member** of a group that departs before adequate cleanup and/or fails to participate in cleanup will earn -50% on their weekly data sheet grade; this includes leaving outdoor activities before returning to lab.

Digital Devices: Each student must have a digital device to participate in Kahoots, access the lab manual, and complete in-lab work; however, **use of digital devices for any other purpose is forbidden. Devices should be put away after the Kahoot and before lab procedures begin.** Failure to respect the device policy will result in grade penalties (see below).

Engagement and Behavior: Please pay attention and participate through the entirety of the lab session. Deductions on weekly data sheet grades for any non-participatory, distracting, or disruptive behavior are outlined below:

- **Lack of involvement and/or engagement in other work** Students will earn 0% on their data sheet(s) and/or their scientific process work if they are observed to be uninvolved during lab procedures and/or data collection (DS penalty), or scientific process work (SPW penalty).
- **Engaging in other work:** Students will earn 0% on their data sheet(s) and/or scientific process work if they are caught working &/or engaging in other personal or non-lab-coursework.
- **Airpods and other audio devices:** At any time, students are not permitted to wear any audio device(s) in, on, or near their ear(s) unless they have an accommodation. Students will earn 0% on their data sheet(s) and scientific process work if they are caught wearing a prohibited audio device such as AirPods.

Safety: Safety is a priority in the lab. Students must abide by all *Lab Safety Rules & Practices* provided on Canvas.

- **Students who commit more than 1 lab safety violations in a given lab period** will receive a 0% for any in-lab submissions (Kahoot, scientific process logs, **data sheets, data reflection work**, etc.) AND be counted as absent (unexcused).
- **Open Toed Shoes or Exposed legs:** For safety reasons, students will not be permitted to enter the lab with open-toed shoes or clothing that does not cover their legs in entirety. Students will receive an unexcused absence unless they arrive to lab within 15 minutes of the starting time wearing the appropriate attire.
- **Regardless of written policy:** If the instructor deems a student's behavior an imminent threat to safety, they will demand that the student stop and immediately leave. The student will be deemed absent (unexcused).

Grading Schema

Canvas will be used for updating and submitting grades and will adhere to the schema below.

Week 1 Syllabus and Safety Quiz	2.5%	
Week 3 Lab Manual Book Check	2.5%	
Scientific Paper Tutorial Assignment	2.5%	
Lab Preparation (Pre-lab Work)*	20.0%	*Lowest week's grade dropped, excluding absences
Attendance and Punctuality*	10.0%	*Lowest week's grade dropped, excluding absences
Data Sheets*	20.0%	*Lowest week's grade dropped, excluding absences
Scientific Process Work*	20.0%	*Lowest week's grade dropped, excluding absences
Composting Mini-Poster*	5.0%	*Attendance required on day of completion
Formal Lab Report*	17.5%	*Attendance required on day of peer review

A+ : 97.45% – 100+%	B+ : 87.45% – 89.45%	C+ : 77.45% – 79.45%	D : 64.45% – 69.45%
A : 92.45% – 97.45%	B : 82.45% – 87.45%	C : 72.45% – 77.45%	F : < 64.45%
A- : 89.45% – 92.45%	B- : 79.45% – 82.45%	C- : 69.45% - 72.45%	

*Notes: Final grades may be altered depending on a student's absence count. Changes to final grades will only be made if you report a discrepancy on Canvas and your final grade is updated as a result.

Elaboration on Grade Categories

- **Week 1 Syllabus/Admin and Safety Quiz (2.5%):** An open-note quiz will be available on Canvas for students to take by the end of week 1 (Friday, 8/29). Students will have up to 4 attempts and the average will become their grade.
- **Scientific Communication Tutorial (2.5%):** This assignment will introduce students to scientific communication and will be completed before the lab report is due. Late work will not be accepted without a permitted extension.
- **Week 3 Lab Manual Book Check (2.5%):** During week 3 (9/8 – 9/10), the instructor will check that each student has purchased/redeemed their access code, set up their account, and can access the lab manual. Students will receive a 0% if they cannot **access** the lab manual through their account by the end of their lab period during week 3.
- **Lab Preparation (Pre-lab Work) (20.0%):** Students must prepare for lab activities before attending lab; weekly lab preparation will include a pre-lab reading / quiz on Canvas comprised of: (1) theoretical background readings; (2) lab procedures and materials; and/or (3) data sheet review and/or practice with calculations. All assigned preparation work will be due before the student's lab section. **Late pre-lab work will not be accepted.**
- **Lab Attendance and Punctuality (10.0%):** Attendance will be graded as 0% or 100% each week and will be logged using a Kahoot that will begin at or within 5 minutes of the start of lab. Kahoots will include questions related to the lab preparation material. Students must receive > 0% on the Kahoot to earn attendance credit. Students who earn 100% &/or score in the top 3 will obtain extra credit, and can do so a maximum of 3 weeks.
- **Data Sheets (20.0%):** For each lab activity, students will fill out data sheets from the lab manual and/or supplied documents. These are due at the end of the lab period unless stated otherwise. Instructors may require the sharing of a live OneDrive document stored on the student's GMU Microsoft OneDrive. Data sheets will be graded by group for most, but not all, weeks; individuals may receive lower grades than their group due to missing components or due to behavior. Data sheets cannot be submitted late without a permitted extension.
- **Scientific Process Work (20.0%):** For most weeks, students will complete hand-written scientific method overviews of at least 1 lab activity, starting from questions and observations and ending with results and conclusions. Sheets may differ week-by-week, but will consist of 2 parts—one completed within a provided time limit during/after pre-lab lectures and due before moving on to the lab procedures, and one completed after data collection has been completed and due within 7 days. Work must be submitted on-paper and/or as digital uploads of hand-written work; electronically completed work will not be accepted. Grades will be based on both completion and accuracy. Work will not be accepted past the required due date/time.
- **Mini Poster (5%):** In preparation for the formal lab report, each student will work on a hand-written/drawn poster on the same lab activity (composting). The poster will present the background, methods, findings, discussion, and conclusion, and include at least 1 outside peer-reviewed scientific article. Students will have an opportunity to discuss their posters to one another during a class period, and the top poster per section will receive extra credit. Students are not permitted to include printed text on their poster, but can include printed images that they bring to class on the day of poster completion.
- **Formal Lab Report (17.5%): Outline (2.5%), Data Analysis (2.5%), Draft (2.5%), Self/Peer Review; (2.5%), & Final Lab Report (7.5%):** Students will be individually complete a formal lab report via an iterative process including a guided outline, data analysis, draft report, self and peer review, and a final report. While data collected for the lab report will originate from group work in lab, **all other components of the lab report must be completed individually.** Besides the peer review process, aid from peers is prohibited. Students must attend the relevant lab sessions where data analysis, outline submission, and peer review are completed to earn credit.

Learning Accommodations

If you have a documented learning disability or other condition affecting academic performance, **make sure it is documented via Disability Services** to determine the accommodations you need (SUB I, Rm. 4205; 993-2474; <http://ds.gmu.edu>). Please **talk with your lab instructor and coordinator to discuss your needs**. The lab instructor and lab coordinator must have your accommodation(s) on file with DS **before** you request accommodation(s). Requests for accommodations **will not be accepted retroactively**.

Academic Integrity

What is academic integrity in this course? When you are responsible for a task, you will perform that task using **your own work**. You will record observations and data based on your group's lab work. You will perform individual assignments without collaborating with others and/or using generative artificial intelligence (AI) inappropriately. It is assumed students have a sense of personal responsibility in all course work they complete.

It is expected that students adhere to the George Mason University Honor Code: *"Student members of the George Mason University community pledge not to cheat, plagiarize, steal and/or lie in matters related to academic work."*

Plagiarism: Anti-plagiarism software will be used in this class for scanning student submissions. Please contact your instructor if you have questions **before you submit an assignment**. Plagiarism includes:

- 1) Presenting the data, words, work, or opinions of someone else—including yourself (***self plagiarism***)—**or AI**—as one's own work **without proper acknowledgment**.
- 2) Borrowing the data, sequence of ideas, arrangement of material, or pattern of thought of someone else, including personal work, **or AI**—without proper acknowledgment.

Fabrication: It is never appropriate to make up lab observations, data, sources, or other information. Any student caught fabricating information will be referred to the Academic Standards Office.

Use of Artificial Intelligence (AI): In this lab course, AI of any type is not appropriate unless used as a research or comprehension tool rather than an answer or task completion tool (unless that task is deemed rudimentary, per the course's and/or assignment specified learning objectives). In any permitted use of AI, citing AI is always required, including a link to the transcript. Citing and verifying any information it provides is always a student's responsibility, and students will be held responsible for incorrect, out-of-context, over-simplified, and/or incorrectly cited information, as well as irrelevant or inaccessible sources provided by AI.

Uses of AI that are **always prohibited** include (a) copying/pasting or uploading course-provided assignments, instructions, procedures, rubrics, etc. into AI; (b) using AI to generate files or text such as data sheets, Excel sheets, reports, or other deliverables for assignments; (c) using AI to make graphs, figures, or tables; (d) using AI to generate text to answer questions and/or directions; and (d) using AI to produce and/or analyze data.

Other examples may be prohibited if deemed as fabrication and/or cheating per the above stipulations. It is always a student's responsibility to explicitly confirm with their instructor whether AI is permitted for a task.

Consequences of academic misconduct: Failure to adhere to the Honor Code and this section's course stipulations will be deemed a violation of academic integrity. Any individual who becomes aware of a violation is bound by honor to take corrective action. Independent of the extent to which these policies have been violated (e.g., a single answer versus a whole assignment), students will be referred to the Academic Standards Office. Consequences will not be decided by your instructor and may range from a course grade deduction or course failure to University suspension or expulsion. **Please see the [Academic Standards website](#) for more information.**

Grading in the age of AI: It is the instructor's right to create course assignments and rubrics that penalize students based on projected results of inappropriate AI use, even without proof of AI use, if said rubrics are aligned with learning outcomes.

Mental and Physical Health

Physical Health Concerns: If you require accommodations for any health-related issues, please email your instructor **proactively** to receive accommodations. **If you suspect that you are sick or have been directed to self-isolate, please quarantine or get tested and email your instructor and/or coordinator a medical note.** If needed, call the [Student Health Services](#) to get a note from a nurse; their **phone number** is (703) 993-2831.

Mental Health Concerns: Diminished mental health can interfere with optimal academic performance. However, it is expected that you show responsibility over your health. In pursuit of this, nurture productive habits and behaviors and do not be afraid to seek out resources that can aid in this nurturing.

Counseling and Physiological Services (CAPS) (<http://caps.gmu.edu>) provides confidential mental health services, including telehealth meetings, to support the academic success of students. Their free and confidential psychological services include group counseling, skills-based workshops, case management, crisis consultations, and time-limited individual counseling.

Please contact your instructor about any struggles affecting your coursework, and please email your lab instructor as early as possible regarding health concerns and/or falling behind.**

Notice of Mandatory Reporting of Sexual Assault, Interpersonal Violence, & Stalking

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 in order 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, & options available to students.

****Please note that, as faculty members, your lab instructor and lab coordinator are designated as *Responsible Employees* and must report all disclosures of sexual assault, interpersonal violence, & stalking to Mason's Title IX Coordinator per University Policy 1202. In other words: *we want to support you, but we are mandatory reporters.***

If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC; <https://ssac.gmu.edu/>) at 703-380-1434 or Counseling and Psychological Services (CAPS; <https://caps.gmu.edu/>) at 703-993-2380. You may also seek assistance from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

Diversity and Inclusivity

Diversity entails different viewpoints, philosophies, and perspectives. Students of diverse opinions, backgrounds and practices are encouraged to voice their opinions or perspectives and hear those of others; however, pursuit of knowledge via the scientific method is the focus of this course, and students may be penalized for submitting work that does not pursue knowledge creation through the scientific method. Additionally, please note that **successful engagement in, and completion of, lab activities is a requirement of this course, and it cannot be replaced with other activities due to personal discomforts or disabilities.** If you feel that labs can be more inclusive, do not hesitate to reach out to your lab instructor or Dr. Schmidt.

Common Policies of the University

Please access the GMU Common Policies [here](#).