George Mason University
College of Science

EVPP 109: Ecosphere I Lab (In Person)

Spring 2025 – 1 credit

Note: EVPP 108 is a separate course and has a separate syllabus.
If you are looking for EVPP 108 information, please access the syllabus in the appropriate LMS course.

Instructor and Lab Section Information

Section	*Instructor / Email*	*Day and Time*	*Location*
201	**Trinity Mills,** *tmills9@gmu.edu*	**M** 10:30 AM – 1:10 PM	David King Hall (DK)
202	**Nicole Firing,** *mfiring@gmu.edu*	**M** 1:30 PM – 4:10 PM	Rm **#3044** *(all sections)*
203	**Nicole Firing,** *mfiring@gmu.edu*	**T** 10:30 AM – 1:10 PM	
204	**Trinity Mills,** *tmills9@gmu.edu*	**W** 1:30 PM – 4:10 PM	

Instructor Office Hours

202, 203	**Nicole Firing,** *mfiring@gmu.edu*	By appointment – Zoom (email)
201, 204	**Trinity Mills,** *tmills9@gmu.edu*	By appointment – Zoom (email)
All	**Stephanie Schmidt,** *sschmi11@gmu.edu*	By appointment – email suggested time or book h

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 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: *EVPP 109 will comprise both in-lab and out-of-lab work.*

In-class lab activities **will include** a **pre-lab lecture**; indoor and outdoor **lab/field exercises** completed in groups; **data sheets** filled out **individually but through group work,** to be submitted before leaving; and **data reflections** to be submitted before leaving.

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 a **scientific tutorial assignment, pre-lab reading on Blackboard**, a **lab post** (1 per group), a written **lab report, and** several other **short assignments** interspersed throughout the semester. On occasion, instructors will assign lab reflection work to be completed outside of class.

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 Blackboard** (and the associated app) to stay updated and to find readings and access/submit assignments or other materials.

- ***Course Communication:*** Use of a *@gmu.edu* address is required. Email and Blackboard will be the primary modes of course correspondence; please check both daily. When sending questions, comments, or concerns to your instructor, use MS Outlook and your @gmu.edu address to email your lab instructor (Instructor Firing or Mills); optionally, "CC" Dr. Schmidt. Always use **EVPP 109 section 20X (where X=1, 2, 3, or 4)** in the subject line, in addition to any further relevant subject phrases. 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:*** ALL class content is the property of GMU; it may not be duplicated, used for commercial purposes, posted online, and/or copied into generative AI without explicit instructor permission.

- ***Instructor Privacy:*** Recording and/or distributing recordings of the instructor are not permitted unless approved.

- ***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 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, where "excused" and "unexcused" are defined 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 athletic 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**

    **Students with >1 scheduling issue should consider enrolling in a different lab section.*

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

Note: Required documentation, but not notice, will be waived for 1 absence.

- ***Makeup Policy for Unexcused Vs Excused Absences*:**

  Unexcused absences: A student with an unexcused absence will receive 0% for attendance, data sheets, and any data reflection work if they have an unexcused absence.

  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 Blackboard within 2 weeks of the missed lab.
  - Students must individually complete data reflection work within 2 weeks of the missed lab.
  - Students can earn full credit on data sheets and data reflection work only if they also complete a separate **makeup assignment** within 2 weeks of the missed lab.

  Note: Makeup work will not be accepted after Monday, 5/5 at 11:59 PM; makeup work from weeks 14 (4/21 - 4/23) or 15 (4/28 - 4/30) must be submitted by 5/5 at the latest.

- ***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, unexcused, and total absence count, respectively** (note: attending alternative lab sessions with approval will not count as an absence). **Students with ≥ 5 total absences will earn a D or F.**

Excused count	**Max. grade**	**Unexcused** count	**Max. grade**	**Total** count	**Max. grade**
1	A+	1	A+	1	A+
2	A+	2	B	2	A+
3	B+	3	C	3	B+
4	C+	4	D	4	C+
5	D	5	F	5	D
6	F	6	F	6	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 an A+ (2 excused), B (2 unexcused), and C+ (4 total absences).*
Thus, their maximum grade is a C+.

- ***Submission of Work:*** Students are also responsible for timely submissions of assignments/ assessments in the correct format (e.g., .docx; .xlsx; etc.) and on Blackboard. **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:*** Late work policies are provided on page 5 per category.
- ***Extension Policy:*** Students wishing to obtain an **extension** on any assignment completed outside of lab (e.g., quizzes, data reflection work, lab post, or lab report) must email their instructor and receive permission, given that they also:
  - 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

  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 5/5.

Other In-Lab Policies and Data Sheet Deductions:

Punctuality: Students must arrive to lab on time to earn an attendance grade via Kahoot, hear the pre-lab lecture, and participate in lab procedures and data collection. Students who miss Kahoots but arrive < 30 minutes after lab begins will (a) earn a 0 attendance grade; however, they can (b) submit data sheets and earn credit for any lab components they were able to participate in after arriving. Students who arrive >30 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 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.

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 when not in use. Failure to respect the device policy will result in data sheet deductions per the behavior guidelines 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:

- Students will earn 0% on their data sheet(s) if they do not help their group complete lab procedures.
- Students will earn 0% on their data sheet(s) if they work on other personal or non-lab-coursework for >50% of class.
- Students will be penalized 25% on their data sheet(s) for each situation where the instructor notices inattentive, non-participatory, distracting, or disrupting behavior—including extraneous use of phones, laptops, or tablets.
- For egregious behavior, the instructor may impose a stricter penalty.

Safety: **Safety is a priority in the lab.** Students must abide by all ***Lab Safety Rules & Practices*** (see lab manual).

- For each violation, students will be penalized **–50% on weekly data sheet(s).**
- **Students who commit ≥ 3 lab safety violations in a given lab period** (besides open-toed shoes) will receive **a 0%** for those lab's **data sheets, any data reflection work**, AND be counted as absent (unexcused).
- **Open Toed Shoes:** Students who arrive with open toed shoes must leave lab and return with closed toed shoes, or choose to receive an unexcused absence. Students can choose to stay for the Kahoot for attendance points, but will be penalized using the punctuality policy based on when they return with closed-toed shoes.
- ***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 receive a **0%** for those lab's **data sheets**, AND be deemed **absent (unexcused).**
- Students need to wear pants at all times.

Grading Schema

Blackboard will be used for updating and submitting grades and will adhere to the following schema. Final grades may be altered depending on a student's absence count. *Note: Changes to final grades will only be made if you report a discrepancy on Blackboard and your final grade is updated as a result.*

Week 1 Syllabus and Safety Quiz	*5.0%*
Week 2 Scientific Paper Tutorial Assignment	*2.5%*
Week 3 Lab Manual Book Check	*2.5%*
*Pre-Lab Preparation**	*15.0%*
*Attendance and Punctuality**	*10.0%*
*Data Sheets**	*25.0%*
*Data Reflection**	*15.0%*
Group lab post (1 per semester)	*5.0%*
Formal Lab Report	*20.0%*

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%		

*Note: for each of the starred categories—*pre-lab preparation, attendance, data sheets, and data reflection work*—a student's lowest grade will be dropped from their final grade.

Elaboration on Grade Categories

- ***Week 1 Syllabus/Admin and Safety Quiz (5.0%):*** An open-note quiz will be available on Blackboard for students to take by the end of week 1 (Sunday, 1/26, before students come to lab during week 2). Students will have up to 4 attempts and their grade will be the average their attempts. Students will receive 75% credit if submitted before their lab period during week 2, and 50% credit if submitted before their lab period during week 3.
- ***Scientific Paper Tutorial (2.5%):*** This assignment will be explained during week 3 and will introduce students to scientific papers. Students will receive 75% credit if submitted within 3 days of the due date, 50% credit if submitted between 3 days and 1 week after the due date, and 0% credit otherwise.
- ***Week 4 Lab Manual Book Check (2.5%):*** During week 4 (2/10 – 2/12), 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 4.
- ***Weekly Lab Preparation (Pre-lab Work) (15.0%):*** Students must prepare for lab activities before attending lab; weekly lab preparation will include a pre-lab quiz on Blackboard based on one or more of the following: (1) theoretical background readings; (2) lab procedures and materials; and/or (3) data sheet review and/or practice with calculations. Quiz grades will be the average of up to 2 attempts. All pre-lab quizzes and/or other assigned preparation work will be due at the beginning of 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 pre-lab quiz questions. Students must receive > 0% on the Kahoot to earn attendance credit. Students who earn 100% will obtain Extra Credit, and can do so a maximum of 3 weeks.
- ***Weekly Data Sheets (25.0%):*** Students will fill out data sheets from the lab manual and/or supplied documents for each week's relevant lab activity/activities. These must be turned in before the end of the given lab period unless stated otherwise. Submissions **must be digital (e.g., PDFs, JPGs)** and must be submitted **on Blackboard**. Hand-written items like sketches can be photographed and uploaded to Blackboard. For some activities, instructors will require the sharing of a live OneDrive document stored on the student's GMU Microsoft OneDrive—e.g., Excel data sheets. Data sheets will be graded by group for most, but not all, weeks; individuals may receive lower grades than their group if missing components of the data sheets and/or due to class-related behavior.
- ***Weekly Data Reflection (15.0%):*** Data reflections will be completed after students finalize data sheets and will connect theoretical concepts to students' observations in lab. Reflections need to be submitted **before students leave lab;** in rare cases, instructors will extend due dates for everyone to Sundays at 11:59 PM (clarified before the end of lab). Data reflection work will be submitted separately from data sheets. If data reflections are submitted <24 hours after the end of lab, the grade will be penalized with a 50% deduction. Work will not be accepted >24 hours after the end of lab periods.
- ***Group Lab Post (5%):*** In preparation for the formal lab report, each group will post an overview of one lab activity on Blackboard within 2 weeks after the activity was completed in class. Directions and assignments will be supplied in class at least 1 week ahead of time. Posts will model lab "blog" reports.
- ***Formal Lab Report (20%): Outline, Data Analysis, Draft, Self/Peer Review; (10%), & Final Lab Report (10%):*** 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 this documentation is on file with Disability Services** to determine the accommodations you need (SUB I, Rm. 4205; 993-2474; http://ds.gmu.edu), and **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 does academic integrity mean 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 that your group personally collected, regardless of whether it was expected.

It is expected that students adhere to the George Mason University Honor Code: *"to promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the University Community have set forth this: 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 the following:

1) Presenting as one's own work the data, words, work, or opinions of someone else—including yourself (***self plagiarism)***—or AI **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.

Use of Generative AI like CoPilot, ChatGPT, Etc.

In this lab course, AI is not appropriate unless used as a study tool rather than an answer tool. Students are not permitted to copy/paste course-provided assignments, instructions, procedures, etc. into AI.

Failure to adhere to the Honor Code and this section's course stipulations will result in the instructor reporting an honor code violation, independent of the extent to which the honor code has been violated (i.e., full copy of assignment or one paragraph of an assignment). Consequences will range from a grade deduction to failure.

> *Any individual who becomes aware of a violation—including your instructor and the course coordinator— is bound by honor to take corrective action.*

See the Academic Standards website for more information on academic integrity.

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.

- Your **instructor/coordinator** is a resource—please contact them about any struggles affecting your course work*.

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

As a faculty member, 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. I.e.: ***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.

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.

Diversity and Inclusivity

The following is George Mason University's *Diversity Statement*:

> "George Mason University promotes a living and learning environment for outstanding growth and productivity among its students, faculty and staff. Through its curriculum, programs, policies, procedures, services and resources, Mason strives to maintain a quality environment for work, study and personal growth.
>
> An emphasis upon diversity and inclusion throughout the campus community is essential to achieve these goals. Diversity is broadly defined to include such characteristics as, but not limited to, race, ethnicity, gender, religion, age, disability, and sexual orientation. Diversity also entails different viewpoints, philosophies, and perspectives. Attention to these aspects of diversity will help promote a culture of inclusion and belonging, and an environment where diverse opinions, backgrounds and practices have the opportunity to be voiced, heard and respected.
>
> The reflection of Mason's commitment to diversity and inclusion goes beyond policies and procedures to focus on behavior at the individual, group and organizational level. The implementation of this commitment to diversity and inclusion is found in all settings, including individual work units and groups, student organizations and groups, and classroom settings; it is also found with the delivery of services and activities, including, but not limited to, curriculum, teaching, events, advising, research, service, and community outreach.
>
> Acknowledging that the attainment of diversity and inclusion are dynamic and continuous processes, and that the larger societal setting has an evolving socio- cultural understanding of diversity and inclusion, Mason seeks to continuously improve its environment. To this end, the University promotes continuous monitoring and self-assessment regarding diversity. The aim is to incorporate diversity and inclusion within the philosophies and actions of the individual, group and organization, and to make improvements as needed."

While this class aims to be inclusive for all students, 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 are non-inclusive and can be better tailored to student diversity, do not hesitate to reach out to your lab instructor or Dr. Schmidt at sschmi11@gmu.edu.

Common Policies of the University

Please access the GMU Common Policies here.