FLORIDA POLYTECHNIC UNIVERSITY

Syllabus:
EVR 2001L Environmental Science Lab
Spring 2026

Course Information

- **Course Number and Title**: EVR 2001LENG01/02/03 Environmental Science Lab
- **Credit Hours:** 1 (1 Lab)
- **Academic Term:** Spring 2026

Instructor Information

- **Instructor:** Dr. Derek Henderson
- **Office Location:** BARC 2259
- **Office Hours**: M/T/R 10:30 AM - 12:00 PM
- **Email address**: dhenderson@floridapoly.edu

Course Delivery and Course Description

- **Delivery Mode**: Delivered in a traditional face-to-face format, students are required to attend classes in person on campus.
- **Course Website**: Canvas
- **Official Catalog Course Description**:
    - **Course Pre and/or Co-Requisites**: By permission only
    - **Communication/Computation Skills Requirement (6A-10.030)**: No
- **Required Textbooks and Materials:**
    - Textbook: N/A
    - Materials: Canvas, Microsoft Office, Microsoft Excel, Calculator

Course Objectives and Outcomes

- **Course Meeting Days, Time & Location:**
    - **Section 01**: Monday 1:00 – 2:50 PM, Room IST 1052
    - **Section 02**: Friday 10:00 – 11:50 AM, Room IST 1052
    - **Section 03**: Monday 3:00 PM to 4:50 PM, Room IST 1052
- **Course Objectives**:
    - The objective of this course is to introduce an interdisciplinary concept and approach to explore the environment that is comprised of both human and non-human elements. Students will be guided to use lab-based apparatus to develop in-depth understanding of the physical, chemical, and biological principles underlying today's global environmental problems. Environmental topics include ecosystems, biodiversity, resources, water quality, pollution, and environmental management. Emphasis will be placed on sustainable development and human influences in the environment.
- **Course Learning Outcomes**:

  Students who successfully complete this course should be able to:

- Remembering: ***Recognize*** common environmental pollutants from human activities and identify their effects on the environment;
- Understanding: ***Explain*** how the ecosystems provide humanity and biodiversity with a diverse array of ecological services;
- Applying: ***Apply*** interdisciplinary approaches to evaluating and proposing solutions for environmental problems, taking into account the natural, social, technological, and political constraints;
- Analyzing: ***Differentiate*** between non-renewable, exhaustible, and inexhaustible material and energy resources, the physical and biological processes through which they are created, and associated environmental constraints;
- Evaluating: ***Discuss*** the complex and diverse relationships between humans and the environment from local to global scales and appraise the environmental impacts of behaviors, choices, and activities in daily lives;
- Practicing: Clearly ***communicate*** related concepts as they apply to current environmental issues.

- **Alignment with Program Outcomes**: Include alignment with General Education Competency; ABET Student Outcomes; or other professional standard, if applicable, e.g. This course supports General Education competency for scientific reasoning. Program Learning Outcomes and General Education Competencies may be found in the Academic Catalog (http://catalog.floridapoly.edu/). Additionally, outcomes may be aligned with level of difficulty per Bloom's taxonomy (see University's Institutional Effectiveness Manual for Academic programs).

Course Learning Outcome	Learning Level (Bloom's / ABET Assessment Example)	Program Learning Outcome (ABET,GenEd, Other)
a) Students will *recognize* common environmental pollutants from human activities and *identify* their effects on the environment.	**Knowledge** – ability to recall previously learned material **ABET Assessment** – lab reports, design project	ABET 1 – an ability to identify formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
b) Demonstrate ability to properly *collect* environmental data and handle environmental samples with team members.	**Knowledge** – ability to apply course material to specific cases. **ABET Assessment** – lab preparation, lab reports	ABET 7 – an ability to acquire and apply new knowledge as needed, using appropriate learning strategies. ABET 5 – an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
c) Students will *apply* interdisciplinary approaches to evaluating and practicing fundamental analytical methods.	**Application** – ability to use learned material in new situations. **ABET Assessment** – lab reports, design project	ABET 1 – an ability to identify formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
d) Students will *understand* the details of environmental systems and processes.	**Comprehension** – ability to grasp meaning, explain, and restate ideas **ABET Assessment** – lab reports, design project	ABET 7 – an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
e) Students will *analyze* the experimental data, *discuss* the results, and *visualize* the findings in the context of environmental impacts with human activities.	**Comprehension** – ability to grasp meaning, explain, and restate ideas **ABET Assessment** – lab reports, design project	ABET 1 – an ability to identify formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

		ABET 4 – an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
f) Students will clearly *communicate* related concepts as they apply to current environmental issues through reports and design project demonstration.	**Application** – ability to use learned material in new situations. **ABET Assessment** – lab reports, design project	ABET 3 – an ability to communicate effectively with a range of audiences. ABET 5 – an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

Academic Support Resources

- **Library**: Students can access the Florida Polytechnic University Library through the University website and Canvas, on and off campus. Students may direct questions to library@floridapoly.edu.
- **Peer Learning Strategists (PLS)**: Are specially trained student leaders who help their peers strategize approaches to course content and work through solution methods. PLS work in collaboration with the courses they support so the content and methods are aligned with your instructors' expectations. Students can meet with a PLS in The Learning Center, which is located on the first floor of the Innovation, Science and Technology (IST) building in room 1019.
- **Academic Success Coaches**: All students at Florida Poly are assigned an Academic Success Coach. Your Academic Success Coach can assist you with academic success strategies. Please visit the Student Success Center on the second floor of the IST building to meet with an Academic Success Coach.
- **Writing Center**: Located on the second floor of the IST (2059/2061), the Writing Center helps students to develop their writing and presentation skills. Consultations are available in person and virtually. For more detail, visit https://floridapoly.edu/writingcenter.

Course Policies

Attendance

- **Lab Participation: Participation is a major component of this course**.
- Students in **face-to-face (this includes labs and C-courses) courses** are expected "to attend all of their scheduled University classes and to satisfy all academic objectives as defined by the instructor" (University Policy, FPU-5.0010AP) and **required**.
- Attendance demonstrates your interest and seriousness as a student. If you have to miss a class, you should inform the instructor **by e-mail at least 24 hours before the class and get approval**. Late e-mail is not acceptable. Students must assume full responsibility for work missed when they are absent.

Participation

Students are expected to participate in the classroom experience. The use of earbuds/headphones during class is specifically not allowed and students who engage in this behavior may be asked to leave the class for the day (noting exceptions for authorized accommodations). In addition, students who routinely do not bring materials to class that are required for participation, will not be given credit for class attendance, and if this becomes a pattern of behavior, may be asked to leave the class for the day. Persistent problems with participation may result in a code of conduct referral.

Late Work/Make-up work

- Homework will be assigned in Canvas with certain due dates. Be sure to check your Assignments in Canvas, and set your reminders as necessary, for the dates and times that correspond to your classwork.
- All homework and project deliverables must be turned in canvas assignments to earn credit and receive a grade. If the assignment is not posted in canvas, a zero will be recorded for that assignment.
- Weekly lab report must be completed by the posted due dates (usually due by next lab). Late submission is allowed; however, **scores will be reduced 50% for each day after the due unless the following condition**.
- Should you have extenuating circumstances, including those dealing with your health, contact your instructor. Your instructor will work with you and others, as needed, in the university community to make the appropriate adjustments. They may, at their discretion, accept a past due assignment, however, you must email your instructor to open the canvas assignment for you. The instructor retains the right to ask for documentation of your 'extenuating circumstance' before they reopen the assignment. The canvas assignment will **remain open for 24 hours after the request has been accepted with a confirmation email from the instructor to the student**.

Grading Scale

Important: make sure to Include the grading scale that will be used in the course. (See also University Grading Policy).

Grade	Percentage
A	100 - 93
A-	92 – 90
B+	89 – 86
B	85 – 83
B-	82 – 80
C+	79 – 76
C	75 – 70
D	69 – 60
F	59 – 0

Assignment/Evaluation Methods

Activity	Percentage
In-class Participation & Attendance	20%
Design Project	25%
Lab Report	55%

Note:
**Changes in syllabus and assignment sheets may be modified as deemed appropriate. All changes will be announced in class.

- **In-class Participation and Attendance (20% of the total grade)**:
    - Attendance for all labs is mandatory and will be taken at the start of every lab. Please be prompt as attendance will be concluded once the lab starts.
    - Your absence will be recorded in Canvas and your attendance score will be deducted accordingly.
    - If you have to miss a class, you should inform the instructor by email before the class and get approval.
    - Excused absences require valid documentation (e.g., doctor's office visit record) by email to the instructor. Extenuating circumstances will be evaluated on a case-by-case basis.
    - At the beginning of each lab, students will work in groups and prepare Lab for the day. Prompt presence in the lab and proper Personal Protective Equipment (PPE) is essential for lab activities.
- **Lab Reports (55% of the total grade)**:
    - Each lab report includes the fundamental scientific backgrounds, methods, evaluation, results, discussions of results, and conclusions.
    - Lab reports are graded on stepwise lab method, summarized results, precise evaluation of results, expanded discussions beyond the results, and technical writing.
    - The student's personal effort is expected on each and every lab assignment. Transcription, copying, or any dishonest way of completing the lab reports will not be tolerated and results in penalty.
- **Design Project (25% of the total grade):**
    - Students will work in groups and practice specific environmental topics using their own idea. Students will present their results and findings during the lab presentation session.
    - To get full credit, all work (e.g. samples, apparatus, designed systems, presentation slides) should be submitted to Instructor by the due date.
    - All work must be created solely for the purposes of this class and must be the student's own. Students should keep a copy of all materials handed in during the course. Grades will be updated after the submission and feedback will be given through Canvas or email.
- **Policy of using AI agents:**
    - Beginning in Fall 2025, the use of AI agents in this course will be closely monitored. Students may use AI agents to review background information for each lab to support their understanding of the content. However, **all lab reports must reflect the student's own understanding and analysis of each lab component.**
    - If a lab report is determined to have been substantially generated by an AI agent, the grade will be **reduced by 50% to 100%.** Students may submit an appeal within one week after the grade is released. In such cases, students will be further evaluated through an in-person interview with the Teaching Assistant (TA) or the instructor regarding the lab content.

University Policies

Reasonable Accommodations

The University is committed to ensuring equal access to all educational opportunities. The University, through the Office of Disability Services (ODS), facilitates reasonable accommodations for students with disabilities and documented eligibility. It is the student's responsibility to self-identify as a student with disabilities and register with ODS to request accommodations.

If you have already registered with ODS, please ensure that you have requested an accommodation letter for this course through the ODS student portal and communicate with your instructor about your approved accommodations as soon as possible. Arrangements for testing accommodations must be made in advance. Accommodations are not retroactive.
If you are not registered with ODS but believe you have a temporary health condition or permanent disability requiring an accommodation, please contact ODS as soon as possible.

The Office of Disability Services (ODS):
DisabilityServices@floridapoly.edu
(863) 874-8770
The Access Point
ODS website: www.floridapoly.edy/disability

Accommodations for Religious Observances, Practices and Beliefs

The University will reasonably accommodate the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of examinations and work assignments. (See University Policy.)

Title IX

Florida Polytechnic University is committed to ensuring a safe, productive learning environment on our campus that prohibits sex discrimination and sexual misconduct, including sexual harassment, sexual assault, dating violence, domestic violence and stalking. Resources are available if you or someone you know needs assistance. You may speak to your professor, but your professors have an obligation to report the incident to the Title IX Coordinator. Please know, however, that your information will be kept private to the greatest extent possible. You will not be required to share your experience. If you want to speak to someone who is permitted to keep your disclosure confidential, please seek assistance from the Florida Polytechnic University Ombuds Office, BayCare's Student Assistance Program, 1-800-878-5470 and locally within the community at Peace River Center, 863-413-2707 (24-hour hotline) or 863-413-2708 to schedule an appointment. The Title IX Coordinator is available for any questions to discussion resources and options available.

Academic Integrity

The faculty and administration take academic integrity very seriously. Violations of academic integrity regulation include actions such as cheating, plagiarism, use of unauthorized resources (including but not limited to use of Artificial Intelligence tools), illegal use of intellectual property, and inappropriately aiding other students. Such actions undermine the central mission of the university and negatively impact the value of your Florida Poly degree. Suspected violations will be fully investigated, possibly resulting in an academic integrity hearing and sanctions against the accused student if found in violation. Sanctions range from receiving a zero on the exam or assignment, to expulsion from the university. Repeat offenders are subject to more severe sanctions and penalties.

Any "special" instructions that are appropriate for academic integrity and the course should go here.
(It is essential that a heading and a statement on what constitutes, includes, academic integrity be included in the syllabus, and that the students be made aware of academic integrity at the beginning of a course.)

Recording Lectures

Students may, without prior notice, record video or audio of a class lecture for a class in which the student is enrolled for their own personal educational use. Recordings may not be used as a substitute for class participation or class attendance. Recordings may not be published or shared in any way, either intentionally or accidently, without the written consent of the faculty member. Failure to adhere to these requirements is a violation of state law (subject to civil penalty) and the student code of conduct (subject to disciplinary action). *Recording class activities other than class lectures, including but not limited to lab sessions, student presentations (whether individually or part of a group), class discussion (except when incidental to and incorporated within a class lecture), and invited guest speakers is* ***prohibited****.*

Course Schedule

Week	*Date (Thursday/Friday)*	*Topic Covered*	*Lab Report Due*
1	January 12	Course introduction/Safety Training	No lab report due
2/3	January 19/26	MLK Day – No Class / L01 Spectrophotometry	Before next class time
4	February 2	L02 Mixing stream and monitoring concentration change	Before next class time
5	February 2	L03 Alkalinity	Before next class time
6	February 9	L04 Monitor eutrophication in lab I	No lab report due
7	February 16	L05 Monitor eutrophication in lab II	Before next class time
8	February 23	L06 Salt toxicity and acid rain toxicity I	No lab report due
9	March 2	L07 Salt toxicity and acid rain toxicity II	Before next class time
10	March 9	L08 Field Sampling and monitor water quality data I	No lab report due
11	March 23	L09 Field Sampling and monitor water quality data II	Before next class time
12	March 30	L10 Using activated carbon to remove dye	Before next class time
13	April 6	Project design-initial sketch	Initial Sketch Before next class time
14	April 13	Project design-construction practice	Presentation Slides by April 12
15	April 20	Project presentation	Final presentation file before April 20

**Subject to change per course policies. Watch for Announcements on Canvas.*