



Introduction to Environmental Science

Summer 2021

Instructor Information

Instructor: Joe J. Figel, PhD

Instructor's Office/Student hours: Wed 11 AM-1 PM via email*, Wed 3 PM-5 PM on Zoom

Instructor's Email Address: jfigel@highline.edu

The best way to contact me is email (either directly using the address above or via Canvas).**

*You will receive immediate responses to emails sent to me during this time.

**With the exception of the Wed 11 AM – 1 PM time slot, emails I receive Monday–Friday between 9 AM–5 PM will usually receive a response within 2-4 hours (often sooner). However, please allow 12–24 hours. If, for some reason, you have not received a response from me after 24 hours, please email again. Emails sent during the weekend and on Holidays will usually not be answered until the following Monday. Note that a Highline email is the only online form of communication that may be used to discuss grades.

Course Information

Department: Life, Ocean, & General Sciences

Item (Section) #: ENVS 101 (4334)

Class meets (days - times): This is an *asynchronous* online course. In other words, you will not “attend” class at a set time. Rather, at times most convenient for your schedule, you will access course material (including pre-recorded lectures, articles, and videos) and occasionally interact via email and discussion boards on Canvas.

Class Meeting Location: 100% online

Course Description

This course stresses a scientific approach toward understanding nature and contemporary environmental problems. We will consider environmental science as an interdisciplinary study integrating the natural sciences and social sciences. The course applies physical, chemical,

biological, and geological principles to understand ecosystems, the impact humans have on ecosystems and how these impacts, in turn, affect humans and the biosphere.

Course Overview

Environmental Science is an interdisciplinary academic field that integrates physical, biological, and social sciences for the study of environmental systems, processes, and problems. At present, a growing human population and continued economic and technological development continue to place enormous pressures on the Earth's environments and, in a growing number of cases, threaten their persistence. As we will detail in this course, ecosystem collapse results in depleted biodiversity and undesirable consequences for humanity. This general education course introduces students to environmental science as an academic field to improve their environmental literacy while developing skills in scientific reasoning, critical thinking and analysis of complex social-ecological issues. Emphasis is placed on comparing international perspectives on environmental problems and solutions to highlight the important role of culture in environmental degradation and preservation.

Student Learning Outcomes

1. Describe the structure and function of major environmental systems, including flow of energy, cycling of materials, and interconnection of living systems.
2. Identify and explain local and global environmental problems and evaluate potential solutions by using scientific reasoning.
3. Critically evaluate local and global problems and solutions.
4. Effectively collect, analyze, and present environmental data.
5. Explain the ecological, economic, and social impacts of local and global environmental actions by nations, corporations, and individuals.
6. Describe how our own personal lifestyles impact the environment, locally and globally.

Course Prerequisites

MATH 081 or higher with a 2.0 or higher.

Course Text(s) and Other Required Materials

Karr et al. 2018. Scientific American: Environmental Science for a Changing World. W. H. Freeman.

In addition to the textbook, there will be a lot of readings, usually assigned on a weekly basis. You will have access to course readings via my uploads to Canvas or through the following search engines:

- Google Scholar: <https://scholar.google.com/>
- Semantic Scholar: <https://www.semanticscholar.org/>
- Highline College library: <https://library.highline.edu/home>

Tips for Success in this Course (Expectations for Students)

1. Complete all readings and all assignments on time. Pay extra attention to the abstracts and figures in the readings.
2. Create a quarter-long calendar that includes dates of your course exams and assignments. I still use a hard copy of a planner but they can be organized online or on your phone; you can decide what works best for you. A visualization of your quarter enables you to better plan and prepare. For example, if two exams and a lab report are due for another course during Week 5, you can complete other assignments ahead of time during Week 4 to reduce your workload.
3. Stay disciplined and organized. Most students find that online courses require more self-motivation and responsibility.
4. Check Canvas regularly (at least twice per day) for new postings and materials.

Information about the Course Assignments

Syllabus Quiz: There will be a short quiz at the beginning of the quarter to ensure that students understand important details specified in the syllabus.

Module Preparation Assignments: Students complete readings/book chapters and respond to questions related to reading material. These assignments will usually involve 400-500 word short essays. Emphasis will be placed on applying scientific reasoning skills, such as formulating hypotheses and interpreting data. There will be 5 module assignments during the quarter.

Homework: These will be very similar to the assignments but will involve more in-depth critical thinking on the given subject matter (4 total).

Science Report/Essay: Students will choose an environmental topic related to material covered in class and will reference at least 5 credible sources to critically analyze the biological, physical, and cultural differences between domestic and international perspectives on the selected topic in a ~1000-word essay.

Quizzes: There will be five online multiple choice quizzes, including the syllabus quiz, based on course materials. These quizzes must be submitted by 11:59 pm on the due date. They may not be retaken unless there is a valid excuse.

Exams: There are two 50-minute multiple choice exams (one mid-term and one Final) that will assess comprehension of course content.

Grading and Related Policies

Though this class contains separate lecture and laboratory components, it will be taught as a single integrated course based upon completion of the following:

Homework	(4 @ 25 points each)	100 points
Quizzes	(5 @ 10 points each)	50 points
Assignments (other)	(5 @ 10 points each)	50 points
Essay/report	(1 @ 100 points)	100 points
Mid-term Exam	(1 @ 100 points each)	100 points
Final Exam		100 points

Total Points		500

See below for a grading breakdown. Please feel free to discuss any assignment, or your grade, with me at any point during the quarter.

4.0 = 95% +	3.3 = 88%	2.6 = 81%	1.9 = 74% (C)	1.2 = 67% (D+)
3.9 = 94% (A)	3.2 = 87% (B+)	2.5 = 80% (B-)	1.8 = 73%	1.1 = 66%
3.8 = 93%	3.1 = 86%	2.4 = 79%	1.7 = 72%	1.0 = 65%
3.7 = 92%	3.0 = 85%	2.3 = 78%	1.6 = 71%	0.9 = 64% (D)
3.6 = 91%	2.9 = 84% (B)	2.2 = 77% (C+)	1.5 = 70% (C-)	0.8 = 63%
3.5 = 90% (A-)	2.8 = 83%	2.1 = 76%	1.4 = 69%	0.7 = 62%
3.4 = 89%	2.7 = 82%	2.0 = 75%	1.3 = 68%	0.0 = <61% (F)

General College Grading Policy

- Only grades of a 0.7 or above will earn credit at Highline College. Below 0.7, the assigned grade is a 0.0.

Program Specific Grading Policies

- Any course used for credit in the AA and AS degrees must be a 1.0 or above.

Course Attendance/Tardiness and Participation Policy

As this course is entirely online and asynchronous, there is no required in-person attendance at the physical Highline College campus.

Assignment Deadlines and Policy on Missed Deadlines and Exams

Only students with “legitimate” excuses (e.g., illness with a doctor’s note) may make up an assignment. However, any makeup work must be completed within 10 days following the regularly scheduled due date and **must have prior approval**. If these policies are not followed, a 15% grade reduction will be given for each day late. After 10 days late, without prior approval, a 0 grade for the assignment or exam will be recorded.

Please see the Course Schedule (on page 7) for assignment due dates.

Academic Honesty

Students are expected to maintain a high standard of honesty in their academic work. Cheating and plagiarism are specifically prohibited under the college’s Student Rights and Responsibilities provisions. Acts of cheating may include submitting work that is not your own or copying exam answers from fellow students.

Plagiarism, the presentation of another’s writing or ideas as your own, can take a number of forms - failing to cite sources, copying source texts or online sources without quotation, or inadequately paraphrasing or synthesizing source materials. If you are unsure of what might constitute plagiarism or cheating, please consult with me or check other college resources for guidance.

Academic dishonesty of any kind will result in a grade of 0.0 on the assignment and possible disciplinary action from the college. If I have reason to believe that you engaged in academic dishonesty, I may be required to report to the Office of Student Conduct after speaking with you about the situation. Students who have more than one report of alleged academic dishonesty at Highline College may be required to meet with a Conduct Officer for a student conduct hearing and have sanctions imposed. It is both your right and responsibility to be familiar with this document: [Student Conduct Code WAC 1321-125](#).

Inclusivity Statement

Highline College considers the diversity of its students, faculty, and staff as a critical component of its educational mission. Highline expects every member of the university community to contribute to an inclusive and respectful environment in classrooms, online, and at campus events. Diversity can include sex, race, age, national origin, ethnicity, gender identity and expression, intellectual and physical ability, sexual orientation, income, faith and non-faith perspectives, socio-economic class, political ideology, education level, primary language, family status, military experience, cognitive style, and communication style. The individual intersection of these experiences and characteristics must be valued in our community.

If the design, instruction, and/or experiences within this course result in barriers to your achievement or sense of inclusion, please notify me as soon as possible and/or contact Student Accessibility Services.

Access Services Statement:

Your experience in this class is very important to me. If you have already established accommodations with Access Services, please communicate your approved accommodations to me at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through Access Services, but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact Access Services at 206-592-3857, access.highline.edu. Access Services is located in building 99 suite 180.

Grievance Procedures:

I hope you will contact me if you experience anything in this course that does not support an inclusive environment. You can also report any incidents you may have witnessed or experienced through the following procedures:

- *For instructional grievance process:*

In the case of a complaint about a course, students are encouraged to speak with their instructor first, and if the matter is not resolved, students should then contact the division chair if the complaint is against a full-time faculty member, or with the department coordinator if the complaint is against a part-time faculty member. For more detail, see the procedure:

http://catalog.highline.edu/content.php?catoid=2&navoid=33#Instructional_grievance

- *For Title IX (claims related to discrimination and sexual harassment)*

It is the policy of Highline College to provide equal opportunity in education and employment and not discriminate on the basis of race, color, national origin, age, disability, sex, sexual orientation, marital status, creed, religion, or status as a veteran of war as required by Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975, [RCW 49.60.030](http://leg.wa.gov/RCW/2016/030) and their implementing regulations. Prohibited sex discrimination includes sexual harassment (unwelcome sexual conduct of various types). For more detail see the procedure: <https://humanresources.highline.edu/faculty-and-staff/policies/title-ix/>

College Policies

For information about college policies on diversity, classroom behavior, incompletes, absences for religious reasons, student grievances, withdrawals, and emergency procedures please click on the related links on Canvas.

Student Resources

The college offers many resources to support student achievement and success. These include Access Services, faculty advising, the Academic Success Centers (math, writing, and general tutoring), the college library, and technical support. For more detailed information on these services, please see the related links on Canvas.

Course Schedule – Introduction to Environmental Science

	Lecture topics
Week 1	Introduction to the Course Syllabus and Policies (Quiz 1: Syllabus) Scientific Literacy (Assignment 1)
Week 2	Global Overpopulation (and Overconsumption) (Homework 1, Quiz 2)
Week 3	Global Food and Agriculture (Assignment 2, Homework 2)
Week 4	Water Resources and Water Pollution (Quiz 3, Assignment 3)
Week 5	Global Energy, Air Pollution, and Climate Change (Assignment 4, Quiz 4, Exam 1)
Week 6	Biomes/Biodiversity and Global Environmental Conservation (Homework 3)
Week 7	Biodiversity and Human/Environmental Health (Assignment 5, Homework 4) Includes a case study on <i>Deforestation and Disease: Exploring the Links between Forest Loss and Human Well-Being</i>
Week 8	Environmental Sustainability (Quiz 5, Final Exam*)

Course content and schedule may be adjusted slightly during the quarter.

* Final exam will be assigned Wed. 8/18 and due Thurs. 8/19 at 11:59 PM