
IB 105: Environmental Biology

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Course Overview

This class is an introduction to the biology of environmental problems. Environmental problems are immensely complex, involving aspects of history, philosophy, behavior, science, economics, social justice, and politics. This course is designed to engage you with a broad perspective on our relationship with land, water, air, and other living things, in order for you to become an ecologically literate citizen. Ecological literacy involves a basic understanding of how the world works, and the ability to see and understand the connections between living and nonliving things. On an individual level, ecological literacy also requires an ability to see the connections among personal behavior, personal health, and the health of natural systems. Ecological literacy requires a comprehension of environmental problems and the ability to distinguish between sustainable and unsustainable uses of nature. Finally – and perhaps most importantly – ecological literacy involves the ability to identify and generate solutions to environmental problems, and to help enact those solutions. We expect you to engage yourself with the essential background information and knowledge necessary to facilitate your own path to ecological literacy.

This course satisfies the General Education Criteria for a Life Sciences course. In addressing the broad scope of environmental biology, we will also cover all the fundamental concepts of the life sciences, including genetics, speciation, evolution, growth and differentiation, metabolism and bio-energetics, ecology, and behavior. We will review scientific methodology, and you will engage in exercises that involve making observations, evaluating data, and problem solving.

Course Objectives

Upon completing this course, students will be able to:

- explain core concepts in ecology, and summarize our ecological understanding of environmental problems.
- describe how humans need nature to survive.
- summarize ways in which sustainability has been defined.
- list environmental problems that are the result of unsustainable human behavior, and explain the root causes of environmental problems.
- explain how human health is related to land health.

- summarize changes in design/architecture, economics, policy, and education that promote sustainability.
- articulate his/her environmental ethic, and list actions to reduce his/her ecological footprint.

Course Structure

This is a **3-credit hour** course. The course is **8 weeks** long and consists of **7 content modules**. We take a one week break for Thanksgiving (Fall semester) or Spring Break (Spring semester). A course week is defined as the period between Saturday, 12:00 AM Central Time, and Friday, 11:59 PM Central Time.

This course includes **30 minutes of online discussion each week**. You select the date and time of this session when you first use the course website. This is your opportunity to discuss the course material with a small group of classmates and your TA. The sessions require audio and video participation. **Attendance is required.**

Course Outline

Week 1: Introduction

You will learn how to navigate the course site, be introduced to your classmates and to the science of the environment.

Week 2: Ecology and Evolution

You will study the current understanding of the natural world. This knowledge gives a foundation for understanding the problems caused by our use of natural resources.

Week 3: Protecting Biodiversity

Biodiversity leads to stability in ecosystems. In this module, we will look at various forms of biodiversity and the influences that maintain or degrade biodiversity.

Week 4: Human Footprints

We will have come to the heart of the matter—the consequences to the environment of the spread of human populations around the globe. We will discuss the global growth of human populations, methods of building sustainable communities, and the agricultural methods have sustained a growing population.

Week 5: Environmental Changes

Humans have had a significant impact on the environment. In this week, we will look at three of the largest impacts.

Week 6: Energy

You will study impacts of the various ways we produce the energy that supports our modern life style.

Week 7: Environmental Policies

You will study the policies and actions that reduce our impact on the planet.

Textbook

RECOMMENDED

Susan Karr, Anne Houtman, and Jeneen Interlandi
Environmental Science for a Changing World (2018, Third Edition)
WH Freeman and Company, New York, NY
ISBN-13: 978-1319059620

Please note that there are no assigned readings or assignments from this textbook. This book is recommended as a supplementary text for students with limited background coursework in the biological sciences.

Grading Scale

Grade	Percent
A+	>97.0
A	93.0-96.9
A-	90.0-92.9
B+	87.0-89.9
B	83.0-86.9
B-	80.0-82.9
C+	77.0-79.9
C	73.0-76.9
C-	70.0-72.9
D+	67.0-69.9

D	63.0–66.9
D-	60.0–62.9
F	<59.9

View the College of LAS Handbook for Students [Grades & Reports](#) page for more information.

Assignments and Weights

Weekly Point Distribution

Week	Lessons	Forum/Assignment	Synchronous Discussions	Environment in the News Comments/Replies	Multi-Week Projects	Total
Week 1	30	35	40	-	20	125
Week 2	30	30	40	10	40	150
Week 3	30	30	40	10	60	170
Week 4	30	30	40	10	55	165
Week 5	30	40	40	10	25	145
Week 6	30	35	40	10	-	115
Week 7	10	-	40*	-	70	80*
Environment in the News (week of choice)	-	-	-	-	50	50
Total	190	200	240*	50	320	1000

* Lowest synchronous discussion grade dropped.

Grades

You can access your grades by clicking the **Grades** link from the dropdown menu on the course home page. All interim and final assignments have due dates. Failure to meet deadlines results in a reduction of the assignment points. For the due dates of each assignment, please see the course calendar or the week overviews.

Week Overview

Each week will begin with an overview, explaining what the week is about, what learning goals you are expected to achieve, how long it will take, and in what activities you will participate. Each week is designed with the same structure and activities unless otherwise specified. The

activities are explained in greater detail below. You can find the due dates of specific assignments in the course calendar and in the week overviews.

Lessons

The first assignments due each week are the lessons. There are three due most weeks. These are a combination of short lecture video clips and text. You will need to answer a series of multiple choice questions to receive credit. You may attempt the lessons three times. Your final grade will be the average of all three attempts.

Assignments

Each week we will have a forum discussion activity. Most of these require that you submit a short post to an online forum by Tuesday and a response to your group by Thursday. Occasionally, you will need to make a selection for the assignment on Monday. The assignments are designed to give you time to reflect on the course material and to provide an original response.

Synchronous Discussions

Our synchronous discussions are online in-person video conferences. These occur each week, on the day and time you choose the first week. They are 30 minutes long and led by your TA. The discussions focus on an assigned podcast, video, or article. They are graded and everyone is expected to participate. You may have one unexcused absence.

Presentations and Projects

We have two multi-weeks projects in the course.

The *Environment in the News Presentations* are designed to be student-led discussions of current environmental issues. These should be topical to the week in which you are presenting, and based on a current, well-sourced news article. You will respond to your classmates' presentations and we encourage you to engage in a respectful, extended discussion of the critical issues that are raised as a result.

The *Climate Reality and Myths Final Project* is due in stages. The multiple assignments associated with the final project will lead you through the process of choosing a common myth, searching the scientific literature, finding a summary review article, interpreting the science, and sharing what you learn with your discussion group.

Extra Credit

There are four primary sources of extra credit in this class:

- Course and weekly Question and Answer (Q&A) forums. You can earn up to two extra credit participation points each week. Each question or answer is worth one extra credit participation point. Only thoughtful answers and questions that do not repeat what is already in the course documents and instructions will receive credit.
- Weekly discussion forums. Thoughtful comments that extend the conversation in the discussion forum beyond the required post and comments are also eligible for extra credit, two points each week.
- Environment in the News Presentation sharing credit. In weeks where there are insufficient EIN presentations for discussion in each group, your TA will choose the best presentation submissions for sharing across discussion groups. You will receive three extra credit points. In addition, students who choose to present in the second week of class receive two points for volunteering to go first.
- Illinois Online Survey and ICES. You will receive 10 points extra credit for completing the LAS ATLAS Illinois Online Survey by the deadline posted on the course website. You will receive an additional 10 points extra credit if >80% of the class completes the University ICES forms for the class.

Student Commitment

By registering for this online course, you commit to self-motivated study, participation in online course activities, and timely submission of all assignments. Furthermore, you commit to accessing the course website and checking e-mail at least 5 days per week and to devoting at least 12–16 hours each week completing the required assignments and readings.

Late Submissions

Assignments, discussion responses, and other written work are due by **11:55 PM Central Time** on the dates specified in the course calendar, unless otherwise specified. We encourage you to work ahead of deadlines where possible. There is a daily point deduction for all late written assignments (-5 points per day). Weekly lessons are not available for credit after the due date.

Unless you obtain permission from your TA, the TA coordinator, or Prof. Punyasena at least one week before a due date, assignments submitted more than three days late will not receive a grade without a note documenting an extended absence due to a medical or personal emergency from the [Dean of Students](#). Absence letters are only provided for absences >3 days.

Because of the course's fast pace and the effect missed assignments have on your ability to complete subsequent assigned work successfully, accommodations will only be made on a case-by-case basis. If you miss more than two weeks of assignments and activities, you are advised to take an incomplete for the semester or withdraw from the course and re-register for the course next semester.

Absences from Synchronous Discussions

Participation in the weekly synchronous discussions is required. You choose the day and time when you first log into the course website. You are allowed one unexcused absence. Additional absences require a note from the [Dean of Students](#). Due to the size of the class, we are not able to guarantee make-up sessions. Please choose the day and time of your synchronous session carefully.

Copyright

Student Content

Participants in University of Illinois courses retain copyright of all assignments and posts they complete. However, all materials may be used for educational purposes within the given course. In group projects, only the portion of the work completed by a particular individual is copyrighted by that individual. The University of Illinois may request that students' materials be shared with future courses, but such sharing will only be done with the students' consent. The information that students submit during a course may, however, be used for the purposes of administrative data collection and research. No personal information is retained without the students' consent.

Non-Student Content

Everything on this site and within University of Illinois courses is copyrighted. The copyrights of all non-student work are owned by the University of Illinois and its Board of Trustees, except in approved cases where the original creator retains copyright of the material. Copyrights to external links are owned by or are the responsibility of those external sites. Students are free to view and print material from this site so long as

- the material is used for informational purposes only;
- the material is used for noncommercial purposes only; and
- copies of any material include the respective copyright notice.

Course materials ***may not*** be mirrored or reproduced on non–University of Illinois websites without the written permission of the course instructor and the University of Illinois Board of Trustees. It is expressly forbidden to make copies of course materials, including, but not limited to, exams and assignments. It is further forbidden to upload any course materials to online websites including, but not limited to, course-assistant sites (e.g. CourseHero), online shared documents (e.g. Google Docs), or other online forums (e.g. Facebook, Reddit). If you upload course material to these sites, we will consider that academic dishonesty of the most severe degree. Please refer to the course material on **Academic Integrity**.

Student Behavior

Student Conduct

Students are expected to behave in accordance with the statutes of all applicable local, state, and federal governments, with the rules and regulations of the Board of Regents, and with University regulations and administrative rules.

The University of Illinois student code is available here: <http://studentcode.illinois.edu/>.

Netiquette

In any social interaction, certain rules of etiquette are expected and contribute to more productive [communication](#). The following are tips for interacting online via e-mail or discussion board messages, adapted from guidelines originally compiled by Von Rospach, Spafford, and Moraes (*A Primer on How to Work With the Usenet Community*, 1983-1995) and Wimsatt, Kernek, and Lozada (2010, *MERLOT Journal of Online Learning and Teaching*).

- Remember that the person receiving your message is someone like you, deserving and appreciating courtesy and respect.
- Be brief. Succinct, thoughtful messages have the greatest effect.
- Your messages reflect on you personally. Take time to make sure that you are proud of their form and content.
- Think about your audience and the relevance of your messages.
- Use descriptive subject headings in your forum posts and e-mails.
- Be careful when you use humor and sarcasm. Online messages are easy to misinterpret.
- When making follow-up comments, summarize the parts of the message to which you are responding.
- Avoid repeating what has already been said.
- Cite appropriate references whenever using someone else's ideas, thoughts, or words. (See our [citation format](#)).
- Do not dominate any discussion.
- Do not use offensive language.
- Never ridicule someone's ability to read or write.
- Use correct spelling and grammar.
- Share tips with other students.
- Stay open-minded and be willing to express even your minority opinion.
- Ask for feedback.
- When in doubt, always check with your TA and instructor for clarification.

Accommodations

If you require specific accommodations due to a [DRES-documented disability](#) or [religious observances](#), please contact Prof. Punyasena and your TA the first week of class.

Technology Requirements and Support

Required Hardware

- Desktop computer or laptop
- Camera attachment
- Microphone
- Speakers/earbuds
- Reliable internet access, with sufficient bandwidth to stream video

Completion of this course requires **access to a computer and internet**. If you do not have a working personal computer, you are expected to make use of a [University computer lab](#) to complete your assignments. Please note that technical problems related to personal hardware, software, and connection issues do not qualify for assignment extensions. You are expected to begin all assignments well in advance of the assignment deadlines.

At minimum, you will need the ability to access the course website and all course material, on and off campus, to play all videos and multimedia used in the course, and a **camera attachment, microphone, and speakers/earbuds** for participation in weekly synchronous discussions.

Please review the [general hardware and software requirements](#) established for all online courses. Additionally, note that when you are off-campus, access to all course materials and full access to library resources is available through the use of the Illinois VPN (virtual private network). Learn more about how to [install the VPN here](#).

Required Software

Moodle is the Learning Management System (LMS) in which our course is housed. The terms "Moodle", "Learn@Illinois", and "course website" are used interchangeably in the course documents.

[Firefox](#) and [Chrome](#) tend to provide the best experience with Learn@Illinois. We recommend that you install and use these browsers.

Some elements of this course may require certain freely downloadable plug-ins in order to function properly. Please view the [Video Help page](#) for information on how to **install Flash** and **enable Javascript** for your preferred browser.

For our online synchronous discussion groups, you will need to have **Zoom** installed and an Illinois Zoom login. Visit <https://illinois.zoom.us/> to install the software and set up your account.

Academic Integrity

Expectations

Academic dishonesty will not be tolerated. Examples of academic dishonesty include the following: cheating, fabrication, facilitating infractions of academic integrity, plagiarism, bribes, favors, and threats, academic interference, examination by proxy, grade tampering, and non-original work.

Academic integrity means being honest about your intellectual work. In the context of our course, this means that the work you submit, either as written assignments or in online quizzes, is a product of your own intellectual effort and not the work of someone else. While you may find that studying as a group helps you better understand the material, when it comes to completing the assignments, you need to undertake this work on your own.

Written assignments in this course will occasionally require you to research a topic using other sources. It is acceptable to use information and data from internet or printed sources as long as the source is **clearly cited**. (Review and always apply the course [citation format](#)). However, under no circumstance is it acceptable to directly copy written information from a source (website or printed) in your written assignments. Even if the source is acknowledged, directly copying or overtly paraphrasing another's work is considered plagiarism. If you use the words and ideas of another as your own, you have only demonstrated the other person's knowledge and understanding, not your own.

What is plagiarism?

Plagiarism is using someone else's words or ideas without properly acknowledging the source. The most basic form of plagiarism is simply copying and pasting passages from a source and using them as your own. **Even if the source is then cited, this is still plagiarism!** In addition, this is only one form of plagiarism. Another common, unacceptable use of someone else's work is using their idea and writing structure, but changing a few words so it is not directly copied. **Simply changing a few words to synonyms, or moving a few words around, does not make the writing your own.**

To properly use an outside source, you need to read and internalize the information, and then paraphrase the ideas to support whatever point you are making in your own writing. And, whenever you paraphrase someone else's ideas, always cite your source!

For more information, and a few good examples, please refer to [this page from our library's website](#). In this course, we will use SafeAssign software to assess originality of student work and detect plagiarism.

Finally, a special note about using quotes in your work. Although properly quoted material is technically not plagiarism, the overuse of quotes obscures whether you understand the quoted material. So, assignments that form points and arguments using quotes from the class material may be heavily penalized.

Copying and Propagation of Course Materials

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Enforcement

Should an incident arise in which a student is thought to have violated academic integrity, the student will be processed under the disciplinary policy set forth in the [Illinois Academic Integrity Policy](#). All alleged incidences of academic dishonesty will be adjudicated using the University FAIR system.

If you do not understand relevant definitions of academic infractions, contact your TA for an explanation within the first week of class.