

Instructor: Dr. Jennifer Fox
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Office Hours: TBD and by appointment

Lecture: MTWR 3:30-5:30

tl;dr

Do your best work and promote the best work of your classmates. Stay healthy and be flexible. Try to anticipate problems and talk to me earlier rather than later. Have fun in the course.

Course Goals and Objectives

In this course you will be introduced to the study of ecology and the environment. We will survey mechanisms and processes at work in the environment, and consider the impact of people and issues of sustainability. We will focus on topics that often appear in the popular media, such as climate change, emerging diseases, and genetically modified organisms. You will develop the ability to critically evaluate discussion of environmental topics, including not only scientific aspects but also social and political factors.

In keeping with the Georgetown University Science requirement, this course will advance your progress toward the following learning goals:

- To understand the basic principles and some current research challenges of one or more areas of science.
- To understand science as a set of methods of inquiry that involve forming and testing hypotheses through the analysis of quantitative and qualitative data.
- To consume and interpret scientific information with critical understanding of the balance of certainty and uncertainty that research findings inevitably reflect.

Course Expectations

I expect you to come to each class prepared, participate actively, treat all members of the class with respect, and turn assignments in on time. You can expect the same from me in return.

Lectures, Discussions, Participation

Our class minutes are a non-renewable resource and we must use them wisely. Attendance at all classes is important and expected. You are responsible for all information presented in class, including any announcements and course content not found in your textbook. Your active participation is expected. Participation entails coming to class prepared, listening actively, and speaking up when required. You may be asked to take a specific stance in a class debate, work in small groups, answer questions, or make a brief presentation to the class. Of course participation is not possible if you are not here, so you must come to every class on time.

Readings

The required text for this course is Withgott and Laposata's, *Essential Environment: The Science Behind the Stories*, Sixth Edition (earlier editions are also fine). Additional readings will be available on Canvas. Assigned readings should be *completed* by the date indicated on the syllabus.

The lectures and readings for this course are designed to supplement, not repeat, each other. We will talk about topics in class that are not covered explicitly in the readings, and you will read about things that we will not discuss in much detail. I often use different examples than the text in order to give you an additional perspective, to highlight different aspects of an issue, or to provide local or current examples. Therefore, to do well in this course you should attend or watch all lectures *and* keep up with the readings.

Evaluation and Grading (tentative)

Your performance in the course will be evaluated based on the following percentages:

One-Hour Exams (3)	30% (highest = 11%, middle = 10%, lowest = 9%)
Final Exam	12
Public Education Campaign	20
Environmental News Briefs	10
Write the Exams	10
Ecological Footprint	9
Discussion and Engagement	9

Final grades will be assigned based on the following percentages: A = 93.33-100%; A- = 90.00-93.32%, B+ = 86.67-89.99%; B = 83.33-86.66%; etc.

Discussion Skills and Engagement

Our course topic is inherently interdisciplinary, and each of you brings expertise and interests to our classroom that nobody else can represent. If your voice is missing from our conversations during class or on discussion boards, that lessens the experience for everyone. In addition, contributing to a collective's success is a valuable skill in nearly every life endeavor, professional and personal. Therefore the quality of your participation on many aspects of the course (e.g., in-class discussions, small group work, news briefs, write the exam) will be considered as a separate component of your course grade. If you do not hear from me, you are doing just fine with this component, but feel free to check in if you are unsure how your contributions to our class are viewed. As mentioned above, participation involves not just answering questions, but actively listening, asking questions, encouraging others to participate, in both in-class and discussion board formats.

Dates and Deadlines

As Ben Franklin almost said, nothing is certain but death, taxes, and deadlines. In this course deadlines are imposed not only to prevent you from falling behind, but also to ensure that your work can be returned to you in a timely manner. Exceptions will be made in cases of serious illness or family emergency and reasonable allowances will be made to accommodate other conflicts if they are brought to my attention *before* the deadline.

Absences

Do your best to stay healthy – get enough sleep, drink plenty of water, exercise regularly, wear a mask, avoid indoor crowds – so (a) you stay healthy and (b) you can attend and participate in class. If you are unable to come to class or anticipate an absence due to planned events, such as religious holidays or University-sanctioned activities, contact me as soon as possible so that we can make suitable arrangements. ***Regardless of your reason for missing a class, YOU are responsible for finding out what you missed, including any announcements and course content not covered in the readings.***

If we have learned anything in the past 3 years, it is to expect the unexpected AND that we can quickly pivot if necessary. If the University is closed due to pandemic, weather, plague of frogs, or other catastrophe, we will do our best to meet in an alternative way. Watch your email for updates.

Sustainability

In an effort to reduce the amount of paper generated by this course, I do not provide hard copies of assignments or readings. Instead, digital versions are posted on the course Canvas site. Assignments will be submitted electronically via Canvas.

Academic Integrity

Copying from published sources or from classmates, failing to give full credit for quotations or ideas (including from course readings), consulting unauthorized materials during an exam, or attempting to pass any work done by others (human or computer) as your own are examples of plagiarism. Plagiarism is a violation of the Georgetown University Honor System. Moreover, it is simply wrong, and undermines the mutual trust on which an academic community must be based. Academic dishonesty in any form will not be tolerated in this course; students found in violation are subject to academic penalties that include, but are not limited to, failure of the course, termination from the program, and revocation of degrees already conferred. If you are worried you might run afoul of the Honor Code or suspect that someone else has, you must let me know. Please refer to honorcouncil.georgetown.edu/system/policies for more details.

Recently, AI-generated writing tools such as ChatGPT have become quite fluent, although not always accurate. I discourage the use of chatbot technology in writing for this course. Writing is an exercise in thinking and solidifying ideas, and outsourcing part of that process to a computer fails to achieve what you have come to Georgetown for – to challenge yourself and to learn. In addition, the output rarely holds up to scrutiny to those with expertise on the topic. If you do use ChatGPT or any other AI technology, you must cite this source by referring to the source within your text AND you must include both the both the prompt you entered and the generated text at the end of the relevant document or discussion post. Because the output of AI-generated documents is not publicly available - unlike a book or journal article – you need to make the source text (prior to any modifications) available for review. Submitting any form of AI's words or ideas without citation will be considered a violation of Georgetown's Honor Code.

Intellectual Property and Copyrights

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Course readings (book chapters, articles, reports) available through Canvas are copyrighted material. These works are made available to you through licensed databases or fair use. They are also protected by copyright law, and may not be further disseminated or reproduced in any form for distribution without permission of the copyright owner (typically the author).

More information about intellectual property and copyright and about computer acceptable use policy and intellectual property can be found at the following websites:

<https://www.library.georgetown.edu/copyright> and <https://security.georgetown.edu/aup-primer-2/>

Better Living Through Silicon

It is easy to take computers and all they do for us for granted – until they fail. It is your responsibility to keep your computer in good working order and to back up your files regularly. This is especially important given the online setting of our course.

The Canvas Web site for this course can be accessed at <http://georgetown.instructure.com>. You will find a copy of this syllabus, announcements pertaining to the course, course assignments and readings, the discussion board, handouts or slide shows used in lecture.

If I need to contact you outside of class, I will send an e-mail to your Georgetown account (@georgetown.edu). *If you check a different account, please set up your Georgetown email account to automatically forward mail to that address.*

I check my email regularly but not constantly, and infrequently in the evening or on weekends. Please be patient as we all attempt to maintain a balance between work and personal times.

Extra Help

The best way to learn is to teach others. I strongly encourage you to take advantage of the collective wisdom of your classmates – let your discussions spill over into time outside of formal class meetings, work together to discuss readings and prepare for class, form informal study groups. *The production of all assignments, however, should be your own work.*

Requests for academic accommodations must be formally filed with the Academic Resource Center (ARC). It is your responsibility to self-identify with the ARC. To schedule an appointment, email ARC@georgetown.edu or call (202) 687-0077. Note that there are no retroactive accommodations.

I am committed to supporting survivors and those impacted by of sexual misconduct, including stalking, relationship violence, sexual harassment, and sexual assault. However, university policy also requires me to report any disclosures about sexual misconduct to the Title IX Coordinator, whose role is to coordinate the University's response to sexual misconduct. Georgetown has a number of fully confidential professional resources who can provide support and assistance to survivors of sexual assault and other forms of sexual misconduct. More information about campus resources and reporting sexual misconduct can be found at sexualassault.georgetown.edu.

I am available during my office hours and am happy to make appointments in order to discuss biology, course specifics, or other matters. If you are having difficulty with the course, please come and see me – the sooner the better – so that we can address the issues before it is too late. If you are enjoying the course, stop by to discuss topics we're covering or things we aren't getting to. I am interested in your questions, comments, and suggestions about this course.

Inclusivity and Diversity

I strive to create a learning environment that supports a diversity of thoughts, perspectives, and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.). To help accomplish this, please contact me with any suggestions.

- If you prefer a name and/or set of pronouns that differ from those that appear in your official records, please let me know.
- If you feel like your performance in the course is being impacted by your experiences outside of class, please don't hesitate to talk with me. If you prefer to speak with someone outside of the course, your academic dean or the Office of Student Affairs are excellent resources.
- We are all on the continuum of learning about diverse perspectives and identities. As a participant in course discussions, you should strive to honor the diversity of your classmates. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.

In an ideal world, science would be objective. However, much of science is subjective and is historically built on a small subset of privileged voices. I acknowledge that it is possible that there may be both overt and covert biases in the material due to the lens with which it was written, even though the material is primarily of a scientific nature. Integrating a diverse set of experiences is important for a more comprehensive understanding of science. Please contact me with your suggestions to improve the quality of the course materials.

Special Notes About Summer Courses

Our summer course will be an intense experience as we cover the same material and concepts as a semester-long course in about a third of the time. During the summer session you have the opportunity to immerse yourself in the topic at hand and to focus on this one course in a way that is not possible during a typical semester, and this can be a rewarding experience.

However, you must recognize that there is no time to procrastinate. Something important (an exam, an assignment, a discussion) occurs almost every day. Because of the cumulative nature of the material, you must get your questions answered as soon as possible, before we move on to new topics that build on the old. Just as with a traditional academic year course, you should expect to spend 2-3 hours on your own outside of each scheduled hour.

The best strategy is to establish a routine that includes time set aside for biology every single day in a space with minimal distractions. Work hard and keep up, seek help as soon as you need it, and you'll do well.

I look forward to spending the semester exploring our environment with you!

Course Schedule (Tentative)

Date	Topics	Readings and Videos (selected)	Assignments Due
Monday	Introductions & Administrivia Resources: Tragedy of the Commons	EE5: Ch. 1, pp. 99-103, 15-18, 422-425 ToC cartoons x2 Watch: ToC video Practice: MatchBench ToC Optional: Hardin (1968)	Read Course policies Complete: Survey 1, 2
Tuesday	Eco Footprints & Sustainability During class: Prelim Footprint Biodiversity: Evolution & Adaptation	EE5: pp. 15-18, 422-425, Ch. 3 (pp. 46-55)	
Wednesday	Measuring Biodiversity Species, Populations, Communities	EE5: Ch. 8 (biodiversity), Ch. 3 (55-56), Ch. 4 (778-81) Judson Wilson	ENB 1
Thursday	Endangered Species, Invasive Species	EE5: Ch. 8 Discussion: Donlan, Rubenstein et al.	WTE 1 (due Saturday)
Monday	Exam 1 (Resources, Biodiversity) Populations: Demographics	EE5: Ch. 3 (55-64), Ch. 6 (115-125)	
Tuesday	Demographic Transitions	EE5: Ch. 6 (125-132) Discussion: Ehrlich, Goldstone, Royal Society	Eco Footprint
Wednesday	Health: Environmental Toxins Emerging Diseases	EE5: Ch. 10 (205-218) Rosenwald	Pub Ed Proposal ENB 2
Thursday	Human Microbiome	Discussion: Specter (Germs), Roth	WTE 2
Monday	Exam 2 (Populations, Health) Food: Soils, Crops, Current Practices	EE5: Ch. 7, Connniff Optional: Stokstad	
Tuesday	Water: Properties & Distribution Water Pollution	EE5: Ch. 3 (27-29, 38), Ch. 12 (253-274) Angier	ENB 3
Wednesday	Water Wars	EE5: Ch. 12 (274-276) Discussion: Specter (Last Drop)	WTE 3
Thursday	Juneteenth: No class		

Date	Topics	Readings and Videos (selected)	Assignments Due
Monday	Exam 3 (Food, Water) Climate Change: Atmosphere & Air Pollution	EE5: Ch. 13	
Tuesday	Climate Change: Evidence	EE5: Ch. 14 Discussion: Kolbert I, NECA	
Wednesday	Climate Change: Impacts	EE5: Ch. 14 (303-322)	ENB 4
Thursday	Climate Change: More Impacts Climate Change: Solutions	Discussion: Laudato Si', Kolbert III	
Monday	Student Presentations		Pub Ed Presentation, Project
Tuesday	Student Presentations Conclusions: What Can We Do?	EE5: pp. 422-425 Discussion: Hertsgaard	WTE 4
Wednesday	Exam 4 (Climate Change, Synthesis)		
Thursday	Independence Day: No class		

EE5: Chapter readings are from Withgott and Laposata, *Essential Environment* (4th, 5th, or 6th Edition). Other required and suggested readings will be posted on Canvas. This schedule is tentative and subject to change (with notice!).