

Instructor: Dr. Jennifer Fox
Jennifer.Fox@georgetown.edu
Regents 373

Lecture: MTWR 3:15-5:15
Regents 239

Office Hours: TR 1:15-2:15 or by appointment

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 and Discussions

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. For at least one class discussion, you will work with a classmate to lead and moderate the discussion. 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*, Fourth or Fifth Edition (earlier editions are also fine if you're willing to translate page and chapter numbers). Additional readings will be available on Canvas or on reserve at the Blommer Science Library in Reiss Science Building. 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 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 (4)	60 (15% each)
Ecological Footprint	8
Public Education Campaign	20
Environmental News Briefs	8
Discussions and In-class Work	4

Final grades will be assigned based on the following percentages: A = 93.3-100%; A- = 90.0-93.3%, B+ = 86.6-90.0%; B = 83.3-86.6%; etc.

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. A late assignment will lose 10% of its value every 24 hours and will not be accepted after 7 days (counting days that class does not meet, including weekends).

Absences

Attendance and participation at all classes is expected and multiple unexcused absences will negatively impact your grade. Absences due to approved events, such as religious holidays or University-sanctioned activities, should be discussed with me beforehand so that we can make suitable arrangements. Routine or excessive tardiness will be treated as absences. ***Regardless of your reason for missing a class, YOU are responsible for finding out what you missed, getting copies of anything distributed in class, and turning in any work collected.***

Academic Integrity

Copying from published sources or from classmates, failing to give full credit for quotations or ideas (including from course readings), or attempting to pass any work done by others 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.

This semester you will submit many assignments through TurnItIn.com, a website that can help you learn to use and cite sources properly. You will receive more details in class.

Sustainability

In an effort to reduce the amount of paper generated by this course, I will typically not provide hard copies of supplemental readings. Instead, digital versions will be posted on the course Canvas site. Most (but not all) assignments will be submitted electronically; you will be given more information as each assignment is discussed in class. When assignments are turned in on paper, I encourage printing on both sides or using the back of clean, discarded printouts.

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. If your own computer is not working, there are public computers in most buildings on campus. I do not accept excuses for late or missing work resulting from lost files, computer crashes, printers without ink, or inability to access Canvas or other Internet resources.

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. If you can't wait at least 24 hours for me to read and respond to a message, it is better to call my office or come to my office in person.

Cell phones and other devices should be turned off and put away and no text messages sent or received during class.

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, stop by Leavey Center Suite 335 or call (202) 687-8354. Note that there are no retroactive accommodations.

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 (in person or electronically) if you have any suggestions.

I am committed to supporting survivors of sexual misconduct, including 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.

A Special Note About Summer School

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 provide a rewarding and productive 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. The best strategy is to establish a routine that includes time set aside for biology every single day. 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	Assignments Due
M June 3	Administrivia & Introduction Resources: Tragedy of the Commons	EE4: Ch. 1, pp. 96-97, 15-18, 414-418 EE5: Ch. 1, pp. 99-103, 15-18, 422-425 Course Info and Syllabus, ToC cartoons x2 Optional: Hardin	
T June 4	Eco Footprints & Sustainability Biodiversity: Evolution & Adaptation	EE4: pp. 15-18, 414-418, Ch. 3 (44-52) EE5: pp. 15-18, 422-425, Ch. 3 (pp. 46-55)	Survey on Canvas
W June 5	Measuring Biodiversity Species, Populations, Communities	EE4: Ch. 8 (160-165, 172-174), Ch. 3 (52-60), Ch. 4 (63-78) EE5: Ch. 8 (biodiversity), Ch. 3 (55-56), Ch. 4 (778-81) Wilson	ENB 1
R June 6	Invasive Species, Endangered Species	EE4 or EE5: Ch. 8 Discussion: Donlan, Rubenstein et al.	
M June 10	Exam 1 (Resources, Biodiversity) Populations: Demographics	EE4: Ch. 3 (52-60), Ch. 6 (112-123) EE5: Ch. 3 (55-64), Ch. 6 (115-125)	
T June 11	Demographic Transitions	EE4: Ch. 6 (123-130) EE5: Ch. 6 (125-132) Discussion: Ehrlich, Goldstone, Royal Society	Pub Ed Proposal
W June 12	Health: Environmental Toxins Emerging Diseases	EE4: Ch. 10 (206-219) EE5: Ch. 10 (205-218) Rosenwald	ENB 2
R June 13	Human Microbiome	Specter (Germs), Roth	
M June 17	Exam 2 (Populations, Health) Food: Soils, Crops, Current Practices	EE4 or EE5: Ch. 7, Conniff Optional: Stokstad	
T June 18	Genetically Modified Organisms	EE4: Ch. 7 (149-152) EE5: Ch. 7 (151-155) GMO cartoons x3 Discussion: Freedman, NAS Report	
W June 19	Water: Properties & Distribution Water Pollution	EE4: Ch. 3 (25-29, 36-37), Ch. 12 (254-271) EE5: Ch. 3 (27-29, 38), Ch. 12 (253-274) Angier	ENB 3
R June 20	Water Wars	EE4: Ch. 12 (271-281) EE5: Ch. 12 (274-276) Discussion: Specter (Last Drop)	

Date	Topics	Readings	Assignments Due
M June 24	Exam 3 (Food, Water) Climate Change: Atmosphere & Air Pollution	EE4 or EE5: Ch. 13	
T June 25	Climate Change: Evidence	EE4 or EE5: Ch. 14 Discussion: Kolbert I, NECIA	
W June 26	Climate Change: Predictions	EE4: Ch. 14 (306-316) EE5: Ch. 14 (303-322)	ENB 4
R June 27	Climate Change: Solutions	EE4: Ch. 14 (316-323) EE5: Ch. 14 (322-329) Discussion: Kolbert III, Lomborg	Eco Footprint
M July 1	Student Presentations		Pub Ed Campaign
T July 2	Conclusions: What Can We Do?	EE4: pp. 414-418 EE5: pp. 422-425 Hertsgaard, Fedoroff et al.	
W July 3	Exam 4 (Climate Change + Cumulative)		
R July 4	Independence Day Holiday - No class		

EE4 and EE5: Chapter readings are from Withgott and Laposata, *Essential Environment* (4th or 5th Edition). Other readings will be posted on Canvas. This schedule is tentative and subject to change (with notice!).