Biol 008 – Ecology and the Environment Summer 2014

Instructor: Dr. Jennifer Fox
jaf243@georgetown.edu
Regents 373

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

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

The details for 2015 may change slightly but the course will be very similar to previous years.

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.

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 Edition. Additional readings will be available on Blackboard 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

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

One-Hour Exams (3)	39 (13% each)
Final Exam	18
Ecological Footprint	12
Public Education Campaign	18
Discussions and In-class Work	13

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, 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. Plagiarism will not be tolerated. If you are ever unsure about whether you should credit a source, err on the side of over-citing and ask for guidance.

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 Blackboard or other Internet resources.

The Blackboard Web site for this course can be accessed at http://campus.georgetown.edu using your NetID and password. You will find a copy of this syllabus, announcements pertaining to the course, lecture outlines and slides, lab handouts, and any additional readings, handouts or slide shows used in lecture or lab.

If I need to contact you outside of class, I will send an e-mail via Blackboard to your Hoyamail account (@georgetown.edu). ***If you check a different account, please set up your Hoyamail 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 mobile devices should be turned off and put away and no text messages sent or received during 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 Blackboard site. Some (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.

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 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, and get 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

Date	Topics	Readings	Assignments Due
M June 2	**Administrivia & Introduction** **Resources:** Tragedy of the Commons	Ch. 1, pp. 96-97, 15-18, 414-418, ToC cartoons	Survey on Bbd
T June 3	Eco Footprints & Sustainability **Biodiversity**: Evolution & Adaptation	pp. 15-18, 414-418, Ch. 3 (44-52)	
W June 4	Measuring Biodiversity Species, Populations, Communities	Ch. 8 (160-165, 172-174), Ch. 3 (52-60), Ch. 4 (63-78), Wilson	
R June 5	Invasive Species, Endangered Species, and Extinctions	Ch. 8 **Discussion:** OnEarth, Pelton, Donlan, Rubenstein et al.	
M June 9	**Exam 1** (Resources, Biodiversity) **Population:** Demographics	Ch. 6 (112-123)	
T June 10	Demographic Transitions **Health**: Environmental Toxins	Ch. 6 (123-130) **Discussion:** Ehrlich, Goldstone, Royal Society Ch. 10 (206-219)	Pub Ed Proposal
W June 11	Emerging Diseases	Rosenwald	
R June 12	Human Microbiome	**Discussion:** Specter (Germs), Roth	
M June 16	**Exam 2** (Population, Health) **Food**: Soils, Crops, Current Practices	Ch. 7	
T June 17	Genetically Modified Organisms	Ch. 7 (149-152), GMO cartoons **Discussion:** Marvier, Federoff, Thompson et al., Kaebnick	
W June 18	**Water**: Properties & Distribution Water Pollution	Ch. 3 (25-29, 36-37), Ch. 12 (254-271), Angier	
R June 19	Water Wars	Ch. 12 (271-281) **Discussion:** Peterson and Posner, Barnett, Specter (Last Drop), WaterFootprint.org	
M June 23	**Exam 3** (Food, Water) **Climate Change**: Atmosphere & Air Pollution	Ch. 13	
T June 24	Climate Change: Evidence	Ch. 14 **Discussion:** Kolbert I, NECIA	
W June 25	Climate Change: Predictions	Ch. 14 (306-316)	
R June 26	Climate Change: Solutions	Ch. 14 (316-323) **Discussion:** Kolbert III, Lomborg, Global Humanitarian Forum	Eco Footprint
M June 30	Climate Change: Wrap-up		
T July 1	Presentations		Pub Ed Campaign
W July 2	**Conclusions:** What Can We Do?	pp. 414-418 **Discussion:** Hertsgaard	
R July 3	**Final Exam** (Cumulative)		

Readings are from Withgott and Laposata, *Essential Environment* (4th Edition), unless otherwise noted. Other readings will be posted on Blackboard. This schedule is tentative and subject to change (with notice!).