Geog 2800: Our Global Environment

Spring Session 2015 Syllabus

Lecture Class Location: Journalism Building, Room No. 0251
Call No: LEC 18786
Lecture Class Time: Monday and Wednesday, 10.20 a.m. - 11.15 a.m.
Lab Class Location: Derby Hall, Room No. 0140
Lab Class Time: Friday, 10.20 a.m. - 11.15 a.m.

Instructor: Sayoni Bose
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Office Hours: Monday, 12.00 p.m. – 2.00 p.m. or by appointment.

Teaching Assistant: Ariel Rawson
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Office Hours: Thursday, 10.00 a.m. – 12.00 p.m.

Course Description:

One of the core foci in Geography has been the analysis of nature-society relationships. This course is an inaugural moment in understanding these complex relationships from within the disciplinary boundaries of Geography. *The fundamental mantra running through the course is that nature and society are not separate phenomena but are bound up with each other. Furthermore the issues of space/place and scale are indispensable in understanding this relationality. In that vein this course will present socio-environmental issues which unfold across multiple sites and scales.* The course is geared towards developing critical perspectives on some of the pressing socio-environmental concerns of the day: anthropocene and global climate change, deforestation, water scarcity etc. Students are encouraged therefore, to ask crucial questions: how these issues unfold, what is the role of natural properties/laws in this, what is the role of socio-power relations (therefore human actions) in this. *The blurring of boundaries between the natural and the social will help produce students as socio-environmental citizens, who do not just witness or are subject to environmental problems, but have the ability to understand and take steps towards changing the status quo for better socio-environments.*

Students will learn: socio-environmental changes occurring at multiple scales (neighborhood/local, regional, global); make connections between their mundane everyday practices (like their lifestyles, consumption behavior) and link it up to environmental impacts at

multiple scales; develop critical geographic perspectives (i.e. discuss how space/place/scale and issues of power are intertwined in this, how this produces inequalities and the steps that can be taken to change the status quo). This is a required course for the People, Society and Environment track for a B.A. in Geography. It is a Natural Science elective for The Ohio State University's General Education Curriculum (GE) requirements for non-science majors.

Goals and rationale of natural science GEC courses:

Courses in natural sciences foster an understanding of the principles, theories and methods of modern science, the relationship between science and technology, and the effects of science and technology on the environment.

Natural Science GEC Learning Objectives:
1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students learn key events in the history of science.
3. Students provide examples of the inter-dependence of scientific and technological developments.
4. Students discuss social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

This course fulfills the objectives by: i) outlining concepts, theories, principles and major findings in physical sciences pertaining to climate change, ecosystems, hydrosphere etc; ii) discussing and using scientific methods; iii) understanding some of the key moments through which scientific knowledge on the socio-natural environment evolved; iii) inquiring into how science and technological knowledge co-inform each other that leads into further research and subsequent mitigation/adaptation to socio-environmental problems; iv) understanding our relationship to nature via case studies, in-class activities, discussions and labs; v) evaluating costs and benefits to environmental problems and solutions.

Course Structure and Requirements:
There will be two lectures and one lab every week. Attendance is mandatory for both the lectures and labs. During the course of lectures and labs, knowledge will be imparted which are not present in the text. Students should be able to make sure that they have all the information disseminated during class hours, in case they miss classes. This class is going to be highly interactive so be prepared to participate in the class by asking questions and chipping in new information.

Required Reading Materials

- **Required Text:** Each Week readings will be assigned from the required text. The name of the text is *Essential Environment: The Science behind the Stories*, Withgott J. and Brennan S., Third Edition, Pearson. This text is available at OSU book stores. You can

also procure a cheaper used version of the book (Third Edition).

- **Additional Reading Materials:** These will be made available on Carmen. You can visit Carmen at https://carmen.osu.edu/ and access all required materials.
- All readings, including from text and any additional readings posted on Carmen must be *completed prior to class*. Keeping up with the reading will ensure a great performance in this course.

Weekly Labs:

The weekly labs are designed to further analyze, interpret, apply, internalize and consolidate the knowledge imparted during lecture classes. The Friday labs will be geared towards completing lab exercises. These exercises are aimed at applying and therefore learning more, the concepts discussed in class. The exercises must be completed and turned in by the end of the lab period. Group work is encouraged, yet the lab exercises should show a high degree of individual enterprise. *All lab exercises are to be handed during class time unless otherwise stated. No lab work outside of scheduled class hours will be accepted.*

Course Website:

Carmen is the course website where you will find a) additional readings; b) powerpoint slides of the lecture (this will merely be an outline and will not replace the knowledge that you can gain by attending the class). The slides will be posted by 9 p.m. the night before the lecture. Make sure you bring the lecture outlines to class so that you can fill up the gaps in the slides as you hear the lecture; c)exam guides; d) grades; and e) discussion boards (this is optional. I will only set up boards if I deem it necessary).

- **Course Evaluation**

Midterm	10%
In-class Participation (Answering short video questions, participating in group discussions/debates, pop quizzes, semi-structured responses etc)	10%
Field Work and Group Presentation	20%
Lab Exercise	25%
Final Paper	35%

1.Examination (10% of final grade) – There will be one midterm (10% final grade). This exam will test your knowledge of all materials from the lectures. The examination will cover material from the part of the course preceding it. Note however, that much of the course content builds upon the material that precedes it. The exam format will consist of multiple-choice, true/false, fill in the blanks, identification and labeling of diagrams, short and medium-sized answers. The exact format of examinations is subject to change, and details will be announced during the week prior to the examination.

2.In-class Participation (10% of the final grade)- In-class participation will take the form of

expressing one's opinions on a topic, answering questions and raising issues that are pertinent. Class participation will be judged on the basis of your responses on short videos, group discussions/debates, pop quizzes and semi-structured responses. This will count towards your attendance and participation in class.

4.Field Work and Group Presentation (20%)- This assignment is geared towards "place-based engaged learning". Place-based learning is where you make the local community the site of learning. Students often learn about global socio-environmental events. However it is important to understand how these events not only unfold 'elsewhere', but how they touch down locally and impact the actual communities that students live in or live close to. This will enable greater "contextual intelligence" by understanding actual community-based socio-environmental issues/problems and the context within which they emerge (both the local context and the global context); and even understand what steps can be taken to engage with the issues or to solve the problems. The goal of this exercise is to have you all do research and experientially educate yourself through actual immersion in fieldwork (therefore engagement with the community). It has two crucial components: a) field work; and b) group presentation. The class will be divided into several groups. Each group will deal with a local pertinent socio-environmental issue either on campus, in the neighborhood or within the Columbus community at large. Some pertinent issues include (but not limited to): restoration of the Olentangy River and its impacts; Olentangy wetlands conservation; waste management within Ohio State campus; green buildings on campus and Columbus and its relationship to global climate change; sustainable transportation within campus and beyond; pharmaceutical pollution of the Olentangy River; sewage treatment and its relationship with the Olentangy River; community supported agriculture in the neighborhood and beyond; micro-scale ecosystem management with respect to the Oval and Mirror Lake etc. Please feel free to add any local issue that you think might be important and which you would want to do research on. Each group will identify *one or two key questions* around the local issue. Following which the groups can develop a questionnaire or a list of interview questions to be administered to community members (you can interview via email, telephone or through actual meetings) or carry out participant observation, or focus groups, investigate the archives etc to answer the key question/s. Following this, the group will present on the local issue in class. The presentation should clearly **outline the issue, the question/s asked of it, the field sites investigated, the field method adopted, the findings and finally coming up with suggestions of what can be done further in the future around the issue.** The presentations must be innovative as well as informative. The groups are encouraged to present not only through **power points and lectures or posters**, but are encouraged to adopt other means of presentation such as skits/short plays, singing/dancing, puppet shows, engage with the audience (rope in the audience to do something), show video clips and **ask the audience meaningful questions** on it or discuss the videos etc. BE INNOVATIVE. The presentation should not take up more than 25 mins. Exceeding the time limit will lead to deduction of points.

5.Lab Exercises (25% of the final grade)- There will be lab exercises every week, which will cover the topic taught during the week (or imply topics taught in the course). These exercises are aimed at deepening one's understanding and interpretation cum application of the material taught in class. Group work is encouraged. However certain answers required in the exercises must display individual effort.

6.Final Paper (35% of the final grade): You are expected to write a final paper on a specific socio-environmental issue in a given context (say in any country in the world, or in any region of the world). The paper must have a central argument (i.e. what you want to say about it in a logical way), and display ample empirical evidence to bolster that argument. A minimum of two journal articles and a book (not including your required class text) must be referenced. Proper citations are required. The paper will be graded based on originality of idea, rigor of referencing and structure of writing. The paper should be 4 pages long (double spaced, please use Times New Roman, 11.5 font size). More will be discussed in class, including how to cite and how to conduct a library search for relevant journal articles and books. Newspaper reports and blogs (which are credible) can also be cited. Please refrain from using Wikipedia. Points will be deducted if Wikipedia or any absolutely insignificant newspaper or blogs are cited.

Grading Scale

93 – 100% A
90 – 92.99% A-
87 – 89.99% B+
83 – 86.99% B
80 – 82.99% B-
77 – 79.99% C+
73 – 76.99% C
70 – 72.99% C-
67 – 69.99% D+
60 – 66.99% D
0 – 59.99% E

Course Policies

Make–ups. Absolutely no make-up exams, quizzes, or assignments will be given without a written doctor's or other official's note stating that you were incapacitated and/or unable to attend. Students with a conflict are expected to notify the instructor or the main geography office by phone or by e-mail before or in the 24 hours following the end of the exam, quiz, or assignment due date. All make-up examinations will be essay format.

Assignments. Students are responsible for handing in all assignments into the instructor's hands by the deadline. Students are not to put assignments in a mailbox, under a door etc. without express permission. Moreover, students are not to email assignments to the instructor. If this is done and a paper is misplaced, the student will receive a zero on the assignment.

Attendance and Tardiness. Students are expected to attend all classes and are responsible for all course information or announcements whether they were present or not. Lecture notes will not be available from the instructor at a later date. Coming in late to class is disruptive to other students and the instructor. Students coming in late to class will not be given the opportunity to make up assignments or quizzes that were given prior to their entrance.

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to

investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

Students with Disabilities: Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/.

Graduating Seniors. Graduating seniors should notify the instructor no later than the third week of class.

Other. ***If you are having a problem with the course material or with the assignments, or if you seem to be just getting behind, please come and see me as soon as possible.***

Course Schedule:

Week	Date	Day	Class Content	Readings
1	1/12	Mo	Syllabus/Ice Breaker	
1	1/14	We	Introduction: The Framing Paradigm and the Discipline of Geography	American Earth (excerpts), Swyngedouw
1	1/16	Fr	Lab 1 Exercise: The Environment and You	
2	**1/19**	**Mo**	**HOLIDAY(MLK DAY)**	**HOLIDAY (MLK DAY)**
2	1/21	We	Foundations of Environmental Science	Chapter 1
2	1/23	Fr	Lab 2 Exercise: Valuating the Environment I	
3	1/26	Mo	Foundations of Environmental Science	
3	1/28	We	Environmental Economics and Environmental Policy	Chapter 2
3	1/30	Fr	Lab 3 Exercise: Valuating the Environment II	
4	2/2	Mo	Environmentalism: Ideology and Collective Action (Ch 8: Charles Harper)	Mann
4	2/4	We	Environmental Systems: Chemistry, Energy and Ecosystem	Chapter 3
4	2/6	Fr	Lab 4: Discussion of Paper and Group Presentation (no exercise)	
5	2/9	Mo	Global Energy Balance	Chapter 13, McKibben (excerpts)
5	2/11	We	Global Energy Balance	
5	2/13	Fr	Lab 4 Exercise: Ice Albedo	
6	2/16	Mo	Global Climate Change	Chapter 14, McKibben (excerpts)
6	2/18	We	Global Climate Change (mid-term review)	
6	2/20	Fr	Lab 5 Exercise:Byrd Polar Research Center Trip	

7	**2/23**	**Mo**	**MIDTERM**	**MIDTERM**
7	2/25	We	Water Quality and Supply in the Earth System	Chapter 12, Pearce (excerpts)
7	2/27	Fr	Lab 6 Exercise: Water Cycle I	
8	3/2	Mo	Water Quality and Supply in the Earth System	
8	3/4	We	Is Population the Environmental Problem?	Chapter 6, Hardin
8	3/6	Fr	Lab 7 Exercise: Water Cycle II	
9	3/9	Mo	Biogeographic Processes and Patterns	Chapter 4,5, Daily (excerpts)
9	3/11	We	Biodiversity and Conservation	Chapter 8, Bryson, Weisman, Robbins
9	3/13	Fr	Lab 8 Exercise: Population	
10	**3/16**	**Mo**	**SPRING BREAK**	**SPRING BREAK**
10	**3/18**	**We**	**SPRING BREAK**	**SPRING BREAK**
10	**3/20**	**Fr**	**SPRING BREAK**	**SPRING BREAK**
11	3/23	Mo	Nonrenewable Energy	Chapter 15, McGraw
11	3/25	We	Nonrenewable Energy	Mooney
11	3/27	Fr	Lab 9 Exercise: Trees of the Oval Walking Tour (Native and Invasive species of trees in Ohio)	
12	3/30	Mo	Alternative Energy and the Environment	Chapter 16, Brown
12	4/1	We	Alternative Energy and the Environment	
12	4/3	Fr	Lab 10 Exercise: Energy Debate	
13	4/6	Mo	Environmental Justice	Sze and London, United Church of Christ on Env. Justice (1,2 chapters only)
13	4/8	We	Environmental Justice	
13	4/10	Fr	Ohio Wetlands FieldTrip **(tentative)**	

14	4/13	Mo	GROUP PRESENTATION	GROUP PRESENTATION
14	4/15	We	GROUP PRESENTATION	GROUP PRESENTATION
14	4/17	Fr	GROUP PRESENTATION	GROUP PRESENTATION
15	4/20	Mo	GROUP PRESENTATION	GROUP PRESENTATION
15	4/22	We	TBD (Work on Paper)	TBD (Work on Paper)
15	4/24	Fr	TBD (Work on Paper)	TBD (Work on Paper)
16	4/27	Mo	GROUP PRESENTATION/**FINAL PAPERS DUE**	GROUP PRESENTATION/**FINAL PAPERS DUE**

Course Outline (subject to change)

Reading References:

Brown L.R., 2011. *World on the Edge: How to Prevent Environmental and Economic Collapse*. New York: W.W. Norton and Company.

Bryson B., 2004. A Short History of Nearly Everything. New York: Broadway Books.

Bullard R.D., Mohai P., Saha R. and Wright B., 2007. Toxic Wastes and Race at Twenty 1987-2007. A Report Prepared for the United Church of Christ Justice and Witness Ministries.

Daily G.C. ed., 1997. *Nature's Services: Societal Dependence on Natural Ecosystems*. Washington D.C.: Island Press.

Hardin G., 1968. "The Tragedy of the Commons." Science, 162:3859, 1243-1248.

Harper C., 2008. Environment and Society: Human Perspectives on Environmental Issues. New Jersey: Pearson Prentice Hall (4th Edition).

Mann S.A., 2011. "Pioneers of U.S. Ecofeminism and Environmental Justice." Feminist Formations, 23:2, 1-25.

McGraw S., 2012. *The End of Country*. New York: Random House.

McKibben B. ed., 2008. *American Earth: Environmental Writing Since Thoreau*. New York: Library of America.

McKibben B., 2010. *Eaarth: Making a Life on a Tough New Planet*. New York: Times Books, Henry Holt and Company.

Mooney C., 2011 (Nov). "The Truth About Fracking." Scientific American, 00368733, 305:5

Pearce F., 2007. *When the Rivers Run Dry*. New York: Eden Project Books.

Robbins J., 2012 (11th April). "Why Trees Matter." The Opinion Pages, The New York Times.

Swngedouw E., 2014 (20th October). "Losing Our Fear! Facing the Anthro-Obscene." ENTITLE BLOG on Political Ecology.

Sze J. and London J.K., 2008. "Environmental Justice at the Crossroads." Sociology Compass, 2:4, 1331-1354.

Weisman A., 2007. *The World Without Us*. New York: Thomas Dunne Books, St. Martin's Press.

Reading (Optional)

Robbins P., 2012. *Political Ecology: A Critical Introduction*. New York: Wiley-Blackwell.