

History of the Environment

Sheila Wille

This document was created in June 2018 as a first draft syllabus for a proposed class on History of the Environment, to be taught in Spring of 2020 to seniors. Three units and the class plans for each are laid out. Time allowed for some research into appropriate readings for this class, which are also included here.

All of the material in this class contributes to the achievement of the United Nations Sustainable Development Goals by providing our students with an understanding of biological, climatological, and geological phenomena that goes entirely beyond the science to reveal the political, economic, and cultural implications of massive environmental change. While the science is crucial to our project in this class, it is in these less “rational” realms that we find causality in history and an inkling about our future experience as human animals.

The class will participate in the “capstone” program that the History department has inaugurated this year (2017-2018) by allowing seniors to research the social and political effects of climate change, write a short paper, and present their findings to their peers. This capstone aims to teach students that, although we may have the science available to solve climate change, the political, cultural, and economic obstacles are not easily overcome. Our future scientists can ill-afford not to be educated in these aspects of environment/human relations.

History of the Environment

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Course Description

This course will take us through two aspects of environmental history that are closely related. The first regards historical and modern ideas of what nature is and how we ought to interact with it. Next, we will situate ourselves in “on the ground” instances of the interaction between people and nature. By investigating both ideas and action, we can see how one affects the other in several periods and how our experience of the environment in twenty-first century America did not spring from nowhere, but was rather constructed from pieces of these past ideas and actions. We will ultimately work to understand why environmentalist movement and environmental legislation in America in the twentieth century looks the way it does.

We will conclude with a section on the politics, economics, and cultural implication of the biggest environmental issue of them all – climate change.

Course Objectives

- To gain an understanding of the following topics
 - o How humans and nature have interacted historically
 - o How humans in the West and in China have understood nature historically
 - o A basic knowledge of climate change and the political, cultural, and economic barriers to solving the problems it presents
- To improve writing skills

Grades

Participation	20%
Discussion leading, in pairs	15%
Papers	30%
Final Presentation	20%
Final Paper	15%

Rules and Expectations

Attendance

Attendance is mandatory, as per the Student Handbook. If you are not in class to answer when I call your name for attendance, I will mark you absent. Students who appear between attendance being taken and the five-minute mark in class will receive a tardy. All others will be counted absent.

No Internet Sources in Paper Writing Unless They Have Been Pre-Approved

Is she serious? Dead serious. We will be spending A LOT of time in the library for this class. You will have plenty of time to order interlibrary loan books for your paper and ample opportunity to check out online databases. There will be books placed on reserve for this class. You will work with the others doing your topic to trade books. You can visit with Ms. James-Jenkin in the library, who can help you to find resources.

There is nothing more detrimental to learning the process of research at the moment than the internet itself. It's a wonderful resource to use **after** you have already learned how to research and can evaluate what you find there. We will use books instead.

For each unapproved internet source that appears in your paper, you will lose five points on the final grade of that paper.

No Technology

Nothing with a screen shall the instructor find in the hand of a student, except on Library Days. Clicking is the enemy of cogitation, and we'll have none of it.

Bring paper, pens, and printed readings. If this is burdensome, take excellent notes and bring those.

No earphones, no phones, no laptops. I will stand for a tablet with the readings on display, but I should be able to see the screen at all times (ie, keep it flat on your desk).

Note Taking

Take notes on lectures and anything your instructor writes on the board during discussions. You will use these notes again in your final paper, and in your in-class writings and quizzes, so these notes are incredibly important to you. Not taking notes can break your grade. **Bring your notes to class every day.**

Make-up work and Extensions

No make ups, no rewrites, no extra credit, no extensions, unless you have an excused absence or are taking an exam. I do not make exceptions for this rule. Own your mistakes and do better next time.

Late papers will lose a full grade per day (24 hours) until they are turned in.

Turning in Assignments

Turn in papers through Turnitin. You **MUST** receive a receipt from turnitin.com and confirm that your assignment was turned in. If you are unsure, mail it before the deadline to my inbox. This year, I will have no patience for claims that turnitin didn't work, and the late papers will be subject to the late paper policy above.

In order to pass the class, you must turn in all assignments unless an exemption has been worked out with the instructor. This sort of exception only occurs in usual circumstances having to do with illness and substitution assignments

Participation

Your grades have a large participation component. Your instructor expects you to come to class -

- 1- Having **done your homework**
- 2- Ready to **discuss** the readings
- 3- Ready to **participate** in class activities
- 4- Ready to actively **take notes** on lectures
- 5- Ready to execute **in-class writings** (bring paper, pens, ALL CLASS NOTES and readings)

Assignments

Papers: There will be 5-6 short papers due in this class, about two per unit. They will ask you to use your class readings to answer a question that ties together what we've been doing in class. Generally, there will be no need to do any outside research for these papers.

Presentations/Final Paper: A handout will be provided for this final project, which will regard climate change

Discussion Leading: Every class period, a pair of students will be in charge of starting us off with a brief review of the reading. You will do a small amount of recap, provide some information about the author if necessary, and relate the work to another text from class. Conclude with a few discussion questions we might ask ourselves during the period.

Academic Integrity

All of the work you turn in for this course should be your own. Do NOT plagiarize.

Plagiarism defined:

“You plagiarize when, intentionally or not, you use someone else’s words or ideas but fail to credit that person. . . . You plagiarize even when you do credit the source but use its exact words without using quotation marks or block indentation. . . .You [also] plagiarize when you paraphrase a source so closely that anyone putting your work next to it would see that you could not have written what you did without the source at your elbow.”¹

Claiming as your own the work of others, in whole or in part, will result in **referral for disciplinary action**, which can include **dismissal from IMSA**. See the IMSA Student Handbook for specific details and be sure to refer to the Chicago Style Guide for IMSA Students (<http://staff.imsa.edu/socsci/chicagostyle/>).

¹ Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams in their book *The Craft of Research*, 2d ed. (Chicago: University of Chicago Press, 2003)

CLASS SCHEDULE

Unit One: What is nature, and what should we do about it?

The first question we will ask in this class regards the way nature has been imagined in the past and especially the way humans were thought to relate to that nature. Is nature imagined to be a fruitful garden, created for humans to subsist on, or a miserly landscape that barely provides us sustenance and requires us to labor extraordinarily hard just to survive? Is nature “improvable” by humans? Can we increase its output or alter its genetics without paying a price? Should we even entertain such ambitions? Is there such a thing as “pristine” nature, untouched by human hand and, if so, is it worth preserving? Is there a moral message embedded in nature for humans by a deity, or is nature non-moral? In this section, the goal is to impart upon students the idea that our ideas about nature are not at all “natural” but are highly dependent on our historical and cultural context. They should also be able to take the next logical step and understand that our concepts of “wilderness”, “balance of nature,” or even “non-moral/not created” nature are often as much a product of our own culture and context as they are of natural science.

1. **Christian Nature**
 - a. Book of Genesis
2. **Natural Theologians’ Nature**
 - a. John Ray, *Wisdom of God* (1691)
 - b. Lecture from Egerton
3. **Enlightenment Nature – Self-balancing nature**
 - a. Isaac Biberg [Linnaeus], “Economy of Nature”
4. **Enlightenment Nature – Cameralist nature**
 - a. Lisbet Koerner, “Linnaean Floral Transfers”
5. Possible class on the Sublime, if you can break Immanuel Kant’s *Critique of Judgement* down to a high school level.
6. **Failure of Enlightenment Optimism**
 - a. Lecture: Natural disasters and the possibility of extinction
7. **Precursors to Darwin**
 - a. Thomas Malthus, *Essay on the Principle of Population* (1803) Ch 1-2
8. **Precursors to Darwin**
 - a. Enlightenment PAPER DUE
 - b. Charles Lyell (Reading?)
 - c. Erasmus Darwin, “Temple of Nature” Selection in class
9. **Darwinian Nature – Violent and Changeable**
 - a. Darwin, *Origin of Species*, Struggle for Existence, Selection 1
10. **Darwinian Nature – Violent and Changeable**

- a. Darwin, *Origin of Species Abridged* p.47-65 and Darwin, *Origin of Species*, Selection 2
- 11. **Social Darwinism**
 - a. In-Class work: Herbert Spencer
- 12. **American Environmentalist Nature – Land Ethic**
 - a. Aldo Leopold, selection
- 13. **American Environmentalist Nature – Wilderness**
 - a. The Wilderness act (def of wilderness, sec 2C)
 - <https://www.wilderness.net/index.cfm?fuse=NWPS&sec=legisAct>
 - i. This is a good opportunity to discuss NEPA and the revolutionary step of requiring an Environmental Impact Statement for all federal action that would have an impact on the environment.
 - b. The Trouble with Wilderness; or, Getting Back to the Wrong Nature by William Cronon (William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature*, New York: W. W. Norton & Co., 1995, 69-90), or an abridged version in Merchant, 379-389
 - c. Stegner, Wilderness Letter <https://wilderness.org/bios/former-council-members/wallace-stegner>
 - d. Use Woman in the Wilderness, Revelations 12 in class
 - e. Lecture on the Uses of “Wilderness” in argument, from Merchant, *Problems in Env History*, pp. 369-373
- 14. **Comparison Piece – Nature in China**
 - a. Darwin PAPER DUE
 - b. See: *Concepts of Nature : a Chinese-European cross-cultural perspective* edited by Hans Ulrich Vogel and Günter Dux ; with an overview and introduction by Mark Elvin.

Unit Two - Case Studies in Environmental History

Where the last unit focused on what humans have historically *imagined* nature to *be*, this unit will delve into several case studies in Environmental History that show how humans have actually interacted with nature, how they have changed it, and how it has changed them. We will start with a few examples from the ancient world, possibly including something from South America on the decline of Mayan civilization. Other topics will include the Cotton South just before and after the Civil War, We will follow the history of insect control from the 1500s to Monsanto in the West, as well as look into the early nineteenth century explosion of the Tambora volcano in Java, which produced famines, cholera epidemics, market fluctuations, and ominous weather across the globe. The lesson of Tambora is crucial to this class – global weather changes wreak global economic and medical havoc. Insects and insect control will

feature heavily in this section, since that is the instructor's specialty, and we will conclude with garbage. William Rathje uses the methods of archaeological excavation to dig into our modern past in landfills, where he finds that our trash from over a hundred years does not actually degrade in any meaningful way, but can be analyzed while very much intact by unenthusiastic graduate students. It's a nice segway into a discussion about trash in the modern age – in the ocean, in our landscape, and even in the global economy as trash from developed nations is offloaded into poorer countries who are paid to take it.

15. ***Environmental History of the Ancient World*** - TBA

16. ***Decline of the Maya*** – Monument building = deforestation = civilizational collapse?

17. ***The Dust Bowl***

- a. Wilderness PAPER DUE
- b. Online sources?
- c. Worster "Organic, Economic, and Chaotic Ecology" in Merchant for the Dust Bowl's role in shifting American Environmentalism from conservationist to ecological.

18. ***The Cotton South and the Boll Weevil***

- a. See Merchant 204-238 for readings and lecture materials

19. ***Global Climate Disaster, 1816***

- a. Wood, *Tambora: The Eruption that Changed the World*, 2 Chapters

20. ***Insect control – 17th and 18th c***

- a. Early Entomology, John Ray *The Wisdom of God Manifest in the Works of Creation* (1691)
- b. *The Profitable Arte of Gardening* (1528)
- c. *The Compleat Vermin Killer* and 18th century

21. ***Insect Control – 19th century and the Heyday of Biological Control***

- a. Tyrell, Bug vs Bug
- b. McWilliams, "Biological Control, Transnational Exchange, and the Construction of Environmental Thought in the US, 1840-1920."
- c. Triumph of Chemical Pesticides

22. ***Insect Control – 20th c***

- a. Rachel Carson and DDT from History Depart Reader
- b. Insects and War – bugs for espionage and as weapons in history. See *War and Nature*

23. ***Chinese Env History***

24. ***The Archaeology of Garbage/Trash Economy***

- a. Rathje on Landfill Archaeology
- b. Brownell in the Nation States book for Trash Economy

Unit Three – Climate Change

We already have a good (although certainly imperfect) sense of what the biological, geological, and oceanic consequences of climate change will be. What is less clear is how humans will adapt to these changes. We will only consider one “worst case scenario” that renders our question about human adaptation entirely moot when we consider the PETM, a period 50m years ago when global temperatures were 8c above average. Humans did not exist during this period, but we do know a bit about what happened to other life forms as a result of this huge climate shift and it is possible that, had there been human civilizations on earth during that period, we would not have survived it. Next, we’ll look at the possibilities for adaptation during less dire straits. Climate migrations that are happening now in Africa and on island nations like Tuvalu and the Maldives will introduce us to our topic, and we will consider also climate migrations yet to come in America (add Texas?). Policy and policy recommendations will also be studied in the form of the IPCC, the Clean Energy Plan, and the global accords from Kyoto to Paris. Finally, we’ll wrap up by talking about rhetoric and discussing whether we think overly apocalyptic or overly optimistic ways of talking about climate change are helpful or harmful to the fight against it.

25. **Case Study – The Paleo-Eocene Thermal Maximum, Living and Dying in an 8C World**

- a. PAPER due – Insect control or Dust Bowl

26. **Climate Migration – The Sahel and The Maldives**

- a. Epule, “Climate Change Adaption in the Sahel” Environmental Science & Policy Volume 75, September 2017, Pages 121-137
- b. Check out: Under an African sky : a journey to the frontline of climate change Peter Hudson
- c. In the Great Green Wall, Oxford Research
<http://climatescience.oxfordre.com/view/10.1093/acrefore/9780190228620.001.0001/acrefore-9780190228620-e-559>
- d. Counternarrative: It’s not climate, it’s politics. “Climate change and conflicts in the Sahel - politics versus science” Benjaminsen, Tor

27. **Climate Migration – New York, Miami, Texas, New Orleans**

28. **The Sixth Extinction**

- a. Elizabeth Kolbert, *The Sixth Extinction* selections on the ocean.

29. **Global Policy on Climate – Kyoto, Copenhagen, Paris**

30. **How We Talk about Climate: Apocalypticism**

- a. James Lovelock, *Revenge of Gaia*

31. **How We Talk about Climate: Apocalypticism**

- a. Paul Sabin, *The Bet*, Chapter “Listening to Cassandra”
- b. Oreskes and Conway – *The Collapse of Western Civilization*

32. *How We Talk about Climate: Cornucopianism*

- a. Ecomodernist Manifesto

33. *How We Talk about Climate: Cornucopianism*

- a. Paul Sabin, *The Bet*, Chapter “The Triumph of Optimism.” (This didn’t go well last time. Can you fix it?)

Unit Four - Final Project

34. Brainstorming for final project

35. Library

36. Library

37. Library

38. Library

39. Library

40. Library

41. Pres – two/three per day

42. Pres – two/three per day

43. Pres – two/three per day

44. Pres – two/three per day

45. Pres – two/three per day

46. Pres – two/three per day

Check out:

http://sites.imsa.edu:2088/ps/eToc.do?contentModuleId=GVRL&resultClickType=AboutThisPublication&searchType=BasicSearchForm&docId=GALE%7C3SLX&userGroupName=imsa_main&inPS=true&rcDocId=GALE%7CCX1393700111&prodId=GVRL

Look here for environmental movement on gale cengage with documents. It’s mostly American, but it’s good for the history of environmental ism.

Final Project – How Does Climate Change Affect People?

Let's get a handle on climate change. You all already know something about the Greenhouse Effect, ice albedo, and ocean warming and acidification from your science classes. In this final project, each team of two will investigate an aspect of the wicked problem of climate change so we can understand it better. **Remember – no websites are to be used in this paper unless they are run by the government or a legitimate entity like NOAA. You absolutely MUST clear every website beyond this with me, or suffer grade related consequences. There is a remarkably useful climate section in the library stacks. Go find it.**

Due:

- A Final Paper – 4-5 pages
 - A Final Presentation – 10-12 minutes
- 1- **What makes Climate Change a Wicked Problem** – Define “wicked problem” and explain in detail what the different parts of the problem are when it comes to climate change.
 - 2- **Sea Level Rise** – How high will it go? What will the new coastlines look like? How will this affect the United States? What do politicians, cities, citizens, and scientists think we should do?
 - 3- **Climate Denialism** – Read *Merchants of Doubt* by Naomi Oreskes and Eric Conway. Tell us what it's about, and why it matters. **You must read the entire book, which is not small.** I'll be asking you questions about it, so be prepared.
 - 4- **Climate Modeling** – How does it work? How well does it work? Can we depend on it? How do people use modelling in their arguments about solving (or not solving) climate change?
 - 5- **Environmental Protection Agency** – Give a history of the EPA. Why was it founded? What have its main goals been and how have they changed over time. What is the EPA currently doing about climate change?
 - 6- **Solutions to Climate Change – Geoengineering** Research this solution and tell us about the state of the debate. What do they mean to do and what is the main criticism against it?
 - 7- **Solutions to Climate Change – Behavior Changes** Research a handful of possibilities including vegetarianism, home energy use, consumer choice (of, say, foods that come from far away or products from big polluters)

- 8- **Solutions to Climate Change – Energy Transition** We have the technology available to effect the energy transition, that is, switch all our energy consumption to renewable sources. Why don't we get it done?
- 9- **Climate Refugees** – Answer one “simple” question: Where will these people go?
- 10- **Effects on the USA and Solutions Already in Place – Pacific Northwest and the Great Plains**
- 11- **Effects on the USA and Solutions Already in Place – The Midwest and Chicago**
- 12- **Effects on the USA and Solutions Already in Place – Texas and the Southwest**
- 13- **Effects on the USA and Solutions Already in Place – The East Coast**