Instructors

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Course Readings

Packet available from instructors ($20)

Course Description

Human history is shaped by the natural environment and the natural environment is, in turn, altered by human history. This semester, we will explore how these two seemingly disparate factors feed back on one another in the United States (and the world) using questions and approaches from both historiography and science.

We will contemplate questions such as:
• What is nature? (who gets to decide throughout history?)
• What is the relationship of humans to nature? (How has the answer changed over time?)
• What roles have science and technology played in this process? (How did they develop as part of the process of knowing nature?)
• How do answers to these questions fit into American history?

Course Goals

As an interdisciplinary honors course, our course goals are closely aligned with the overall learning goals of the BHP as a whole. During this course we expect you to:
• Develop your critical thinking skills
• Expand your original research skills
• Identify the role science has played in helping us study nature
• Understand the role of nature in American history

To maximize the value of this class for you, it is expected that you attend every class, come prepared to participate in every discussion and complete assignments thoroughly and on time, with academic integrity and original thought.

You can expect us to:
• Challenge your thinking and expand your understanding of science and history
• Return your assignments punctually and with useful feedback
• Treat you with respect and courtesy
• Support you in the process of having a truly original natural adventure

Course Requirements & Assessment
This course will be run as an interactive seminar centered on class discussion. Students are expected to do outside reading and research and share their findings with the class. Your grade will be based on:

1. Class Participation (20%)
   Your class participation grade is divided into two categories: 1) general attendance & participation (10%), 2) in-class activities (10%). We have provided you with both background readings and questions for most class sessions (available on Blackboard). You are expected to use these questions and guidelines to direct your reading, and should come to class prepared to answer and discuss those questions (category 1). To guide our group discussions further and to help us pinpoint critical issues that arise for you from these readings, we will regularly ask you to write short "minute essays" on one or more of these questions in class (category 2).

2. Projects (20% each)
   The course is divided into three units, each culminating in a project designed to highlight the main theme of that unit. The projects include: Project 1: “Case study of a biological invasion”, Project 2: “Analyzing images of nature in contemporary culture” and Project 3: “The future of the feedback: predictions about pressing environmental problems” Though the formats will vary, each project allows you the chance to practice interdisciplinarity and to hone your research and writing skills. Detailed instructions and guidelines will be posted on Blackboard under “Assignments”.

3. Field trips (10% each)
   We have organized four field trips this semester, two local and two in Philadelphia. You are expected to attend one of each. These field trips are carefully selected to magnify and underscore critical issues we discuss in class. We will randomly assign you to two of the four trips, but you are welcome to trade trip "tickets" if you are unable to arrange your schedule for the two Friday afternoons assigned to you. We cannot accommodate the whole class on all the trips because we don't have enough vehicles for everyone to go on all of them. Further, this is unscheduled class time and may interfere with other appointments you may have. There will be preliminary readings and questions (available on Blackboard) in advance of each trip and you will be expected to write a short essay (1-2 pages) after the trip.

Academic Integrity

Academic dishonesty includes any unauthorized collaboration or misrepresentation in the submission of academic work. In all written work, whether in class or out of class, the student's name on the work is considered to be a statement that the work is his or hers alone, except as otherwise indicated. Students are expected to provide proper citations for the statements and ideas of others whether submitted word for word or paraphrased. Failure to provide proper citations will be considered plagiarism and offenders will be subject to the charge of plagiarism specified in the statement of regulations. For more information, please see The Source (available on Rider’s website).

The easiest way to avoid plagiarism is to never “cut-and-paste” words or phrases from electronic materials (e.g., internet sites, journal article PDFs) directly into your paper. Instead, take notes on your sources, and always indicate to yourself what portions of your notes are direct quotes and too-close paraphrases. This should not discourage you at all from selective use of other people’s ideas and results. Generous acknowledgment of ideas and facts highlight to the reader what information is yours and what information is from other people. (adapted from the Biology Dept., Swarthmore College)

A Note on Wikipedia: Wikipedia is not appropriate as the primary or sole reference for any assignment.

Course Schedule
*All readings are in the course packet unless otherwise noted.

**Week One: Our Adventure**
- Sept 6  Welcome & Introduction
- Sept 8  What is Interdisciplinarity?
  - Gibbs & Stanton, “Beetles, Mites & Flies”; Steinberg, “The Great Food Fight”

**Unit One: Biological Revolutions**

**Week Two: Evolution**
- Sept 11  Darwin, Evolution & Natural Selection
  - Kettlewell, “Selection Experiments on…the Lepidoptera”
- Sept 13  Biogeography and History
  - Quammen, “So Huge A Bignes”
- Sept 15  Beaver and Other Ecosystem Engineers
  - Jones, et. al., “Organisms as Ecosystem Engineers”

**Week Three: A New Look at The New World**
- Sept 18  Where Did All The Big Game Go?
  - Krech, “The Great Pleistocene Die-Off” (see Blackboard, Course Document); Jansen and Martin, “Neotropical Anachronisms”
- Sept 20  Beyond the Eco-Indian
  - Smith, “Seed Plant Domestication”
- Sept 22  Field Trip # 1: Wildflower Preserve (no regular class meeting)

**Week Four: The Columbian Exchange**
- Sept 25  History from Below the Ground
  - Crosby, “Ecological Imperialism”; Diamond, “Predicting Environment’l His.”
- Sept 27  A View from the Eighteenth-Century
  - Chaplin, “Comparing English and Indian Bodies”
- Sept 29  Virgin Soil Theory Tested
  - Jones, “Virgin Soils Revisited”

**Week Five: Natives vs. Aliens**
- Oct 2  Rethinking Biological Invasion
  - Peretti, “Rethinking Biological Invasion”; Larson, “The War Of the Roses”
- Oct 4  class cancelled (project editing time)
- Oct 6  Project # 1 due

**Unit Two: Nature’s Nation**

**Week Six: Wilderness & the American Mind**
- Oct 9  From a Desolate Wilderness to the Natural Sublime
- Oct 11  Lewis & Clark: Nature and Nationalism
  - Instructions at http://monticello.org/jefferson/lewisandclark/instructions.htm
- Oct 13  Field Trip # 2: Academy of Natural Sciences (no regular class meeting)

Film screening--**AN INCONVENIENT TRUTH**--MONDAY, OCTOBER 16th at 4:30 pm in **BLC Theater** (You are **required** to see this film. We strongly urge you to attend this screening.)
**Week Seven: Nature vs. Civilization**
Oct 16  Tales of Extinction and Survival
  ➢ Price, Missed Connections”; Pollan, “The Apple”
Oct 18  The Dodo & Tambalocoque
  ➢ “Plant-Animal Mutualism”
Oct 20  **Field Trip # 3: Wagner Institute** (no regular class meeting)

**Week Eight: The Nation’s Nature**
Oct 23  The Preservation v. Conservation Debate
Oct 25  Breaking the Chain?: Data & Scientific Method
  ➢ Taylor et. al., “Loss of a Harvested Fish Species”; Ernest & Brown, “Delayed Compensation for Missing Keystone Species by Colonization”
Oct 27  **Field Trip # 4: Carson Road Woods** (no regular class meeting)

**Week Nine: The Culture of Nature**
Oct 30  Constructing Nature
  ➢ Cronon, “The Trouble with Wilderness”
Nov 1  The Bambi Syndrome
Nov 3  **Project # 2 due**

**Unit Three: Science, the Environment & Modern America**

**Week Ten: Science Goes to War**
Nov 6  Ecology, Nature’s New Science
  ➢ McIntosh, “Ecology Since 1900”
Nov 8  Natural Enemy, Natural Ally: Toward an Environmental History of War
  ➢ Russell, “Speaking of Annihilation”
Nov 10  “Woman vs. Man vs. Bugs”
  ➢ Carson, excerpt from *Silent Spring*

**Week Eleven: Science Down on the Farm**
Nov 13  Guest Lecture: Genetic Engineering
Nov 15  Superfoods
  ➢ Pollan, “The Potato”
Nov 17  You Are What You Eat

**Week Twelve: The Adventurers’ Un-official Fall Break**
Nov 20  Class Cancelled (fieldtrip time)
Nov 22-24  Thanksgiving Holiday

**Week Thirteen: Nature & Power**
Nov 27  What is Energy?
  ➢ Kirsch, “The Electric Car and the Burden of History”
Nov 29  Energy Alternatives
Dec  1  The Skeptical Environmentalist
       ➢ Lomborg, “The Truth about the Environment”

*Week Fourteen: Will Climate Change Be THE Historical Event of Our Time?*

Dec  4  An Inconvenient Truth?
       ➢ Editorials
Dec  6  Feedback Loops
       ➢ Kolbert, “The Climate of Man”
Dec  8  Wrap-Up

**Project # 3 due**  Thursday, December 14th  9:30 am