

ENVST 3364: CHALLENGES TO GLOBAL SUSTAINABILITY

Tuesdays and Thursdays, 10:45 AM – 12:05 PM, WEB 2230 (Warnok Engineering Building)

Instructor:

Dr. Andrew Jorgenson, PhD (professor of sociology)

Email: andrew.jorgenson@soc.utah.edu, **please email me through Canvas**

Office Location: BEH S 404

Office Phone: (801) 581-8093 (NO VOICEMAIL)

Office Hours: Tuesdays, 12:45 PM - 2:15 PM

Teaching Assistant

Jennifer Givens, MA, PhD candidate

Email: jennifer.givens@soc.utah.edu, **please email me through Canvas**

Office Location: OSH 152

Office Hours: Tuesdays and Thursdays 9:45 AM - 10:45 AM and by appointment

Course Summary and Objectives

This 3000-level course provides a multidisciplinary and introductory overview of the human causes, environmental and ecological consequences, and potential solutions to various sustainability challenges in global contexts. As a required class for environmental and sustainability studies majors, the course is largely grounded in the environmental social sciences, but also draws from the natural and earth sciences. The considerations of various global environmental sustainability problems, which involve a critical assessment of their human causes, consequences, and potential solutions, serve as the topics for the course. You will be exposed to how research is done in this diverse area of scholarship. You will also be expected to actively participate in classroom discussions.

Required Readings

- Book (available at the campus bookstore): *Humans in the Landscape: An Introduction to Environmental Studies*, authored by Kai Lee, William Freudenburg, and Richard Howarth. Published in 2013 by W.W. Norton & Company, ISBN: 978-0-393-93072-6 (paperback).
- *All other required readings will be available on the course's Canvas webpage.*

Course Requirements and Grading

There will be a total of three take home essay exams (turned in via Canvas), three short reaction papers (turned in via Canvas), and a series of 10 unannounced in-class quizzes. The essay exams will deal with the assigned readings, lectures, in-class films (unannounced screening days!), and in-class class discussions. The reaction papers will deal with the in-class films and related in-class discussions. Each of the reaction papers will be no more than two

pages in length, and instructions will be provided for the reaction papers when appropriate. You are expected to watch the films in class. The professor will not loan students his personal copy of any of the films. The unannounced quizzes will consist of 1-2 questions from the assigned readings. These are intended to encourage students to keep up with the assigned readings. The TA or professor will also take roll on a random basis, which could impact borderline final grades.

To allow students to keep track of their progress in the course, the professor will use the following grading system. Simply, the exams, reaction papers, and quizzes will be graded on a point system.

Exam 1	50 possible points
Exam 2	50 possible points
Exam 3	50 possible points
Reaction Paper 1	10 possible points
Reaction Paper 2	10 possible points
Reaction Paper 3	10 possible points
Quizzes	20 possible points (2 possible points per quiz)

	200 total possible points

Class Policies and Student Responsibilities

Students and faculty at the University of Utah are obligated to behave in accordance with the ordinances of the University. The Student Code (or Students' Rights and Responsibilities) is located on the Web at: <http://www.admin.utah.edu/ppmanual/8/8-10.html>

You are encouraged to review this document. All of the rights and responsibilities applicable to both the student and the faculty member will be observed during the semester.

Academic Integrity and Plagiarism

Academic misconduct, including plagiarism, is a serious offense. The following regarding academic integrity and plagiarism is taken from the University of Utah's Student Code: "Academic misconduct" includes, but is not limited to, cheating, misrepresenting one's work, inappropriately collaborating, plagiarism, and fabrication or falsification of information, as defined further below. It also includes facilitating academic misconduct by intentionally helping or attempting to help another to commit an act of academic misconduct.

a. "Cheating" involves the unauthorized possession or use of information, materials, notes, study aids, or other devices in any academic exercise, or the unauthorized communication with another person during such an exercise. Common examples of cheating include, but are not limited to, copying from another student's examination, submitting work for an in-class exam that has been prepared in advance, violating rules governing the administration of exams, having another person take an exam, altering one's work after the work has been returned and before

resubmitting it, or violating any rules relating to academic conduct of a course or program.

b. Misrepresenting one's work includes, but is not limited to, representing material prepared by another as one's own work, or submitting the same work in more than one course without prior permission of both faculty members.

c. "Plagiarism" means the intentional unacknowledged use or incorporation of any other person's work in, or as a basis for, one's own work offered for academic consideration or credit or for public presentation. Plagiarism includes, but is not limited to, representing as one's own, without attribution, any other individual's words, phrasing, ideas, sequence of ideas, information or any other mode or content of expression.

The Student Code states that academic misconduct can be sanctioned in the following ways: "Academic sanction" means a sanction imposed on a student for engaging in academic or professional misconduct. It may include, but is not limited to, requiring a student to retake an exam(s) or rewrite a paper(s), a grade reduction, a failing grade, probation, suspension or dismissal from a program or the University, or revocation of a student's degree or certificate. It may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing.

Faculty Responsibilities

As the instructor for the course, the professor will:

- Convene classes unless valid reason and notice given
- Perform and return evaluations in a timely manner
- Inform you of:
 1. General course content
 2. Course activities
 3. Course evaluation methods
 4. Course grading scale
 5. Course schedule of meetings, topics, and due dates.
- Ensure that the class environment is conducive to learning. This includes limiting student use of cell phones, reading newspapers during class, talking during class, arriving late and leaving early and other disruptive behavior.

Americans with Disabilities Act (ADA)

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Course Schedule (SUBJECT TO CHANGE!)

*** Notes: for Assigned Reading, “Book” refers to *Humans in the Landscape: An Introduction to Environmental Studies*; all other readings available via Canvas ***

Week 1 (Tuesday, January 7 & Thursday, January 9)

- Course Introductions
- Humans in the Landscape: Environmental Social Sciences and Environmental Studies
 - Environment and Sustainability
 - Integrative Problem Solving
- What is Natural?

- ❖ Assigned Reading
 - Book: Chapters 1 and 2 (skim chapter 2)

Week 2 (Tuesday, January 14 & Thursday, January 16)

- Commons
 - The Origins of Environmental Problems
 - Community Based Governance
- A World Without Edges
 - Globalization(s) from the Stone Age to the Present
 - Disproportionality at Multiple Scales

- ❖ Assigned Reading
 - Book: Chapters 3 and 4
 - Grant, Don, et al. 2013. “Targeting Electricity’s Extreme Polluters to Reduce Energy-Related CO₂ Emissions.” *Journal of Environmental Studies and Sciences* 3:376-380.

Week 3 (Tuesday, January 21 & Thursday, January 23)

- The Architecture of the Planet
 - Climate, Life, Nature
 - Biogeography and Diversity
 - The World is Ecosystems
- **Take-Home Exam #1 Distributed on January 23, Due on January 28**

- ❖ Assigned Reading
 - Book: Chapter 5
 - Liu, Jianguo, et al. 2007. “Complexity of Coupled Human and Natural Systems.” *Science* 317:1513-1516.

Week 4 (Tuesday, January 28 & Thursday, January 30)

- The Most Successful Species?
 - Human Domination & Ecosystems
 - Settlement, Society, Complexity
- Ecosystem Services
 - Planetary Boundaries?
- ❖ Assigned Reading
 - Book: Chapter 6
 - Rockstrom, Johan et al. 2009. “A Safe Operating Space for Humanity.” *Nature* 461: 472-475.

Week 5 (Tuesday, February 4 & Thursday, February 6)

- Climate Change
 - Why Climate Matters
 - The History of Industrialization and Fossil Fuels
 - The Greenhouse Effect, Global Warming and Climate Change
 - Tackling the Grand Challenges of Climate Change
- ❖ Assigned Reading
 - Book: Chapter 7
 - Rosa, Eugene, and Thomas Dietz. 2012. “Human Drivers of National Greenhouse Gas Emissions.” *Nature Climate Change* 2: 581-586.
 - Roberts, Timmons. 2009. “Climate Change: Why the Old Approaches Aren’t Working.” Published as chapter 14 in *Twenty Lessons in Environmental Sociology*.

Week 6 (Tuesday, February 11 & Thursday, February 13)

- Humans and Their Habitats
 - Population Growth and Urbanization
 - Fertility, Mortality, Age Structure, Migration, Future Projections
 - Heterogeneity in Environmental Impacts of Population Dynamics and Distributions
 - Global Urbanization, Poverty and the Environment
- ❖ Assigned Reading
 - Book: Chapter 8
 - Jorgenson, Andrew, et al. 2010. “Cities, Slums, and Energy Consumption in Less-Developed Countries, 1990-2005.” *Organization & Environment* 23:189-204.

Week 7 (Tuesday, February 18 & Thursday, February 20)

- Biological Diversity
 - Why Does Biodiversity Matter?
 - Pressure, State, Response—and Resilience
 - The Sixth Great Extinction
- ❖ Assigned Reading
 - Book: Chapter 9
 - TBD

Week 8 (Tuesday, February 25 & Thursday, February 27)

- Sustainability
 - The Situation of the “Most Successful” Species
 - IPAT, STIRPAT, Globalization and Sustainability
 - Warfare, Militarization, and Sustainability
 - The Ecological Intensity of Human Well-Being
- **Take-Home Exam #2 Distributed on February 27, Due on March 4**
- ❖ Assigned Reading
 - Book: Chapter 10
 - Jorgenson, Andrew. 2014. “Economic Development and the Carbon Intensity of Human Well-Being.” *Nature Climate Change*.
 - Clark, Brett, et al. 2012. “The Treadmill of Destruction and the Environmental Impacts of Militaries.” *Sociology Compass* 6/7:557-569.

Week 9 (Tuesday, March 4 & Thursday, March 6)

- Environmental Awareness
 - The Emergence of Environmentalism
 - The Globalization of Environmental Concern
 - Science, Diffusion of Sustainability Worldviews
- ❖ Assigned Reading
 - Book: Chapter 11
 - Givens, Jennifer, et al. 2013. “Individual Environmental Concern in the World Polity: A Multilevel Analysis.” *Social Science Research* 42:418-431.

Week 10 (Tuesday, March 18 & Thursday, March 20)

- Collective Action
 - Governing the Commons
 - Regulations
 - Movements, Countermovements, Civil Society, Organizing for Change
 - Have Environmental Policies Been Successful? How Can They Be More Successful?

- ❖ Assigned Reading
 - Book: Chapter 12
 - Gareau, Brian. 2013. “What Happened to Ozone Layer Politics?”
<http://www.e-ir.info/2013/01/29/whatever-happened-to-oz-one-layer-politics/>

Week 11 (Tuesday, March 25 & Thursday, March 27)

- Markets
 - Prices and Choices
 - Markets and Nature
 - Natural Capital, Economic Capital, Valuing the Future, Cap-and-Trade
 - Environmentally Responsible Business Practices, Investments and Divestments
- ❖ Assigned Reading
 - Book: Chapter 13
 - Mckibben, Bill. 2013. “The Case for Fossil Fuel Divestment.”
<http://www.rollingstone.com/politics/news/the-case-for-fossil-fuel-divestment-20130222>
 - Jarvis, Brooke. 2013. “Can a Divestment Campaign Move the Fossil Fuel Industry?”
http://e360.yale.edu/feature/can_a_divestment_campaign_move_the_fossil_fuel_industry/2629/
 - Ciplet, David, et al. 2013. “A New frontier for Fossil Fuel Subsidy Reform?”
<http://www.truth-out.org/news/item/20417-a-new-frontier-for-fossil-fuel-subsidy-reform>

Week 12 (Tuesday, April 1 & Thursday, April 3)

- Addressing Affluence & the Role of Technology
 - Postmaterialism
 - Technology & Consumption, the Jevon’s Paradox
 - Recycling and Redesign
- ❖ Assigned Reading
 - Book: Chapter 14
 - York, Richard. 2006. “Ecological Paradoxes: William Stanley Jevons and the Paperless Office.” *Human Ecology Review* 13:143-147.

Week 13 (Tuesday, April 8 & Thursday, April 10)

- Learning and Transitions
 - Learning from the past and present
 - Sustainability Transitions
 - Behavioral Wedges

❖ Assigned Reading

- Book: Chapter 15
- Dietz, Thomas, et al. 2009. “Household Actions Can Provide a Behavioral Wedge to Rapidly Reduce US Carbon Emissions.” *Proceedings of the National Academy of Sciences* 106: 18452-18456.

Week 14 (Tuesday, April 15 & Thursday, April 17)

- TBD
- **Take-Home Exam 3 Distributed on April 17, Due on April 22**

Week 15 (Tuesday, April 22)

- Course Wrap Up