

Course Syllabus

Environmental Studies 303: Human Ecology and Sustainability

Instructor: Rebekah Green, rebekah.green@wwu.edu

Introduction

This course will introduce you to the study of humans as organisms and as a species in our environment – which is, of course, now effectively the entire earth. We will study the interactions between human and natural systems, and their outcomes on sustainability. Topics include human effects on natural systems, and the way natural systems have shaped our energy use, food consumption, population size, all within the context of solving environmental problems.

The ecology of any organism depends on the characteristics of that organism in relation to its bio-physical setting. First, this entails understanding the most ecologically relevant aspects of humans – ourselves, individually and in various sizes of “groups.” We will need to understand something about our evolution and development, and how we organize institutions at various scales to begin to understand what aspects of ourselves are most relevant to discussions of sustainability. There are various ways of learning about ourselves that may lend not just knowledge and insight, but also practical ways forward. So this course necessarily is about humans, and about knowledge.

Second, we will look at the “bio-physical settings” in which humans live. Our focus will be on understanding the links and interdependencies between “natural systems” and “human systems.” These linkages or couplings are indeed now so pervasive that one of the necessary challenges of human ecology is to find ways of understand both “kinds” of systems in one approach, which nonetheless accommodates the great variety in time and spatial scale, as well as qualitative differences, such as between different biome-human ecologies. We will revisit a variety of ecological concepts in light of human ecology.

We will begin to apply what we learn about humans as organisms, and human-nature coupled systems to inquire critically about what we mean by “sustainability.” This is a course where we will no doubt ask more questions than we conclusively answer. This is not surprising, because arguably no one can claim at this time to have “solved” the intellectual or the practical problems of attaining “sustainable” ecological relations of humans! As in other questions that concern the future, we are more or less on the same footing here! Welcome to the discussion—if you choose to take this course, you will be expected to actively participate in it!

Learning Goals

A. To explore conceptual frameworks in human ecology & sustainability

1. To identify and experiment with different perspectives useful in understanding how human communities reciprocally interact with their natural surroundings.
2. To critically assess and apply classic and contemporary conceptions of human ecology and sustainability.

B. To understand human and cultural adaptation & evolution

3. To study humans as evolved organisms in natural environments.

4. To understand how humans respond to and adapt to the natural world uniquely by way of physiology, learning, cognition, language, social organization, culture, and symbolism.
5. To understand culture as constraining, creative and dynamic, and entailing technologies (material, energy and information), idea systems and consciousness, and institutions.
6. To study the use of energy, information, and material in different cultures and the environmental effects of these uses.
7. To compare different adaptive regimes, including ones that have succeeded and failed to be sustainable.

C. To encourage a deeper concept of sustainability

8. To appreciate in detail two cases of human-nature system change
9. To examine determinants of human behavior in light of the problem of sustainability.
10. To examine how human communities can adapt to environmental constraints to achieve sustainable societies locally, regionally, and globally.
11. To inquire into the effects on the environment of the interactions of human groups and institutions.
12. To explore forms of human learning and knowledge as they relate to sustainability.

Text and Resources

- Moran, E. F. (2006). *People and nature: An introduction to human ecological relations*. Oxford: Blackwell Publishing.
- White, R. (1991). *Land use, environment, and social change: The shaping of Island County, Washington*. Seattle: Univ. of Washington Press.
- Diamond, J. (2005). *Collapse: How Societies Choose to Fail or Succeed*. London: Viking Press. (Optional)
- Readings available via the Blackboard, under the Readings tab.

There are, of course, a myriad of resources on sustainability on the internet. Here is a handful of high-quality sites:

- Encyclopedia of the Earth, <http://www.eoearth.org/>
- Sustainability Science, <http://sustsci.aaas.org/index.html>
- CHANS, <http://www.chans-net.org/default.aspx>
- Resilience Alliance, <http://www.resalliance.org/1.php>
- Land-Ocean Interactions in the Coastal Zone, <http://www.loicz.org/>

Grading Rubric

Assignment	Pts Each	Quantity	Total Points
3 Quizzes/reading responses*	5	~3	15
Learning Communities	varies	~10	20
Behavior change project	10	1	10
Take home essay	10	3	30
Final presentation	5	1	5
Final paper	15	1	15
TOTAL			100pt

A	≥	93%
A-	≥	90%
B+	≥	87%
B	≥	83%
B-	≥	80%
C+	≥	77%
C	≥	73%
C-	≥	70%
D	≥	65%
F	≥	64%

*As needed, I may assign additional reading responses. As such, the quantity and total points may change. Total points will be adjusted accordingly.

** In class learning community assignments will be created throughout the quarter. In class participation through bringing in material to class, engaging in discussion or activity, and occasional notetaking for your group will all be counted towards this aspect of your grade.

Assignment Policy:

- Behavior change project due in Blackboard, *beginning of class period*.
- Essays due in Blackboard AND in class as paper copy, *beginning of class period*.
- Late assignments will receive a 10% reduction for each 24-hour period after the due date and time. Exceptions follow university policy for Medical Leave of Absence (via Student Health Center), and Emergency (Non-Medical) Leave of Absence (via Office of Student Life), or if late submission is pre-arranged. No assignments will be accepted more than one week late.
- Quizzes, learning community activities and other classroom activities will have points assigned to them. They cannot be made up, except for university-approved absences.
- All unclaimed papers will be put in a folder in the 'student papers' file in Arntzen Hall 217 after quarter grades are turned in. They will be discarded after 1 quarter.
- Any student with a disability that may affect their performance in this class is encouraged to speak to the instructor or the Office of Student Life (360-3844) to arrange for suitable accommodation.

Learning Challenges:

- 1) **Attendance, discussion & participation.** This class is a human ecology of its own. I hope to provide or provoke a variety of activities that will make your time here worthwhile; it will be far more rewarding for all if you are *present* (physically and mentally)! I will also expect you to be prepared, and routinely call on people for informed contributions to discussing the readings. Throughout the quarter, I will be giving quizzes, asking for reading responses, or asking you to take part in in-class activities. All of these count toward your grade, and cannot be made up.

- 2) **Behavior self-change project.** You will have the chance to try out changing your life to be more environmentally sustainable. During the first three weeks of the course, you will choose a specific behavior to change, observe your behavior, make a goal for changing this behavior, and then attempt to make this change. You will be discussing your decisions in class in learning communities, and holding each other accountable to your goals. At the end, you will write a 2-3 page paper describing the process and the data you collected on yourself. This will also be an opportunity to reflect on your individual's and the wider society's ability to move towards greater ecological sustainability.
- 3) **Three take-home essays** on each of the three major sections of the course. The first will focus on broad ideas about human-nature systems, including cultural evolution and ecology. The second will focus on the Island County case study. The third will concern humans' positive potentials for more sustainable ecologies. For each I will give you four to five questions, and you will choose two of them to write on, with a total of 1,300 words (not including your reference list). Your response should demonstrate a strong understanding of lectures, readings, activities and discussions. You are welcome to use resources in addition to those assigned, but at least two class readings and one or more class discussion/lecture/activity should be cited in a standard style (APA preferred, but not required).
- 4) **Final paper.** In groups of three, you will write a group paper of about 6,500-7,000 words on a theoretically-informed description of a specific coupled human-natural system which you investigate. The topic should explore how humans interact with a natural resource, considering both how they impact the resource and how their society is shaped by the resource. This resource could be a geographic place, a non-human species, or a non-living material.

Each person in the group should individually research and write about a specific example or aspect of this human – nature interaction, using appropriate citations for all researched material. (For example, in a group selects human interactions with sheep, one member could research Iranian nomads, another New Zealand wool production, and another industrial agricultural production of veal.) The final paper will include both jointly written sections (introduction, discussion and reflection) and individually written sections on each case study.

The papers are due in BB by the final exam period Wednesday, March 20th, 8AM.

I will look for excellence in a) conceptualization, b) depth or research, c) a lucid and critical evaluation of course readings and topic-specific sources, and d) accepted use of English in grammar and construction. Please organize an a outline PRIOR to writing and PROOFREAD your final draft before submission. You can upload a final draft of your paper to the Writing Center at www.acadweb.wvu.edu/writingcenter/. The Center will review your draft for clarity, organization,

grammar, and punctuation; typically they respond within 48 hours, but it may be longer at the end of the quarter.

- 5) **Final presentation.** *Your group will give a 10-minute presentation on your paper.* These will begin on Wednesday, March 6th. You can use PowerPoint, Prezi, or use other kinds of illustrations/demonstrations. Everyone must attend presentations; audience members or learning communities will be asked at random to assist in timing and giving feedback. I will hand out a rubric for presentation grading late in the quarter, but in general, you will be expected to provide an overview of your H-N coupled system, show how humans effect nature and nature effects society, analyze your system in light of class materials, and present in a professional manner.

Plagiarism

Plagiarism will not be tolerated. Proper in-text and bibliographic citation using APA or another commonly used format is **mandatory**. Using citations, your paper should clearly distinguish between your analysis (your ideas, your comparison or contrasting or other's work, your application of a (cited) idea), and the ideas of others. In-text citations should include page numbers for all direct quotes or paraphrases of specific sections in another author's work. In-text citations without page numbers can be used when you are referencing or describing the overarching theme or content of another person's work. Your paper should end with a full list of all works cited, using APA or another standard bibliographic format. For help using the APA style, feel free to use online citation helpers such as <http://www.calvin.edu/library/knightcite/index.php>.

All essays and final papers will be submitted through SafeAssignment in Blackboard. These feature will note all locations where your writing closely matches online material, academic articles and other sources. Uncited closely matched text will be closely evaluated for plagiarism. If plagiarism is found in any assignment, you will receive a failing grade for the assignment, with no possibility of making it up. Familiarize yourself with what the term means at: <http://libguides.wvu.edu/plagiarism>. SafeAssignment also includes a feature where you can elect to include your written work in a global database. This will protect your work and ensure that future students cannot use *your* writing without properly citing you!

ENVS 303 Winter 2013

DRAFT SCHEDULE OF TOPICS, READINGS & ASSIGNMENTS (subject to revision):

<i>Date</i>	<i>Topics</i>	<i>Assignments</i>
WEEK 1		
Tues. Jan. 8	Introduction to course	
Wed. Jan. 9	What is sustainability?	Moran, Ch 1; bring two definitions or statement of "sustainability" to class.
Fri. Jan. 11	Behavior change discussion	Decide on a goal for your behavior change project.
Coupled Human – Nature Systems WEEK 2		
Mon. Jan. 14	What is human ecology? Background on human impact on global systems	Bring in three researched facts on assigned impact issue. To be turned in, with citations.
Tues. Jan 15	Coupled human and nature systems	Liu et al 2007
Wed. Jan. 16	Primer on social theory	Assigned Nat'l Geog article, H-N coupled system worksheet
Fri. Jan. 18	Inquiry into human nature systems Behavior change observations, contract	Moran 2 pp. 26-38 only Bring in behavior change observations of self, with idea for a measurable target
Cultural Evolution WEEK 3		
<i>Mon. Jan. 21</i>	<i>No class – Rev. Martin Luther King Jr. Day</i>	
Tues. Jan. 22	Cultural evolution	Moran, Ch 3
Wed. Jan 23	Cultural evolution	
Fri. Jan. 25	Cultural ecology & energy	Kemp; Rappaport;
Ecological Collapse WEEK 4 (Quiz)		
Mon. Jan. 28	Cultural ecology & materialism	Cook; Shiva
Tues. Jan. 29	Case studies in ecological collapse/thriving	Moran, Ch 4
Wed. Jan. 30	Case studies in ecological collapse/thriving	Diamond, Ch 14
Fri. Feb. 1	Changing behavior	Behavior change project write-up due
Case Study: Whidbey and Camano Islands WEEK 5 (Quiz)		
Mon. Feb. 4	Catch-up on material, as needed	
Tues. Feb. 5	Case study: Island County, Washington	White, Intro, Ch. 1 (pp. xi-34); two assigned groups bring in supplemental presentation material (SPM)
Wed. Feb. 6	Discussion of Essay Questions	First essay questions due
Fri. Feb. 8	Case study: Island County, Washington	White, Ch. 2, pp 35-53; SPM
Case Study: Whidbey and Camano Islands WEEK 6 (Quiz)		
Mon. Feb. 11	Case study: Island County, Washington	White, Ch 3, SPM
Tues. Feb. 12	Case study: Island County, Washington	White, Ch. 4, SPM
Wed. Feb. 13	Case study: Island County, Washington	White, Ch 5, SPM
Fri. Feb. 15	Case study: Island County, Washington	White, Ch 6, SPM

Human Adaptability and Institutions for Sustainability		
WEEK 7		
Mon. Feb. 18	Presidents' Day	
Tues. Feb. 19	Case Study: Island County, Washington	White 7 and conclusion. SPM
Wed. Feb. 20	Adaptation, human evolution and human development	Moran, Ch 5
Fri. Feb. 22	Decision making, risk	Second essay questions due
Drama of the Commons		
WEEK 8		
Mon. Feb. 25	Decision making, risk/Drama of commons	Hardin
Tues. Feb. 26	The drama of the commons	Moran, Ch. 6
Wed. Feb. 27	Social control and commons	Ostrom; Moran, Ch. 7
Fri. Feb. 28	Alternatives to over consumption and material-energy economic growth	Daily; Horwitz and Finlayson
Sustainability and Alternative Path to Consumption		
WEEK 9		
Mon. Feb. 4	Alternatives to over consumption and material-energy economic growth	Wackernagel et al; also browse the Living Planet Report
Tues. Mar. 5	Alternatives to over consumption and material-energy economic growth	Moran, Ch. 8 Diamond, Ch 15
Wed. Mar. 6	Class members lecture	
Fri. Mar. 7	Class members lecture	
Human Nature Coupled Systems Examples		
WEEK 10		
Mon. Mar. 11	Class members lecture	Third essay questions due
Tues. Mar. 12	Class members lecture	
Wed. Mar. 13	Class members lecture	
Fri. Mar 15	Class members lecture	
FINALS WEEK		
Wed. Mar. 20, 8:00-10:00	Class members lecture	Human ecology final paper due

Some bibliographic info for reading material without clear publication information:

Rappaport, Roy A. "The Flow of Energy in an Agricultural Society," *Scientific American*, 1971, p. 116.

Cook, E., "The Flow of Energy in an Industrial Society," *Scientific American*, 1971, p. 135.

Kemp, W. "The Flow of Energy in a Hunting Society," *Scientific American*, 1971, p. 104.

The Shiva piece is the first chapter in a book published in 2008.

The National Geographic article on Bhutan was written in May 1991. The Dogan one was from October 1990. Kamchatka was from August 2009 and the Murray-Darling Basin article was from April 2009.

Patterns of Subsistence Films:

Abrams, I. R., & Bishop, J. (Producer). Womack, M. (Writer). (1994). *Patterns of subsistence: Foragers and pastoralists*, Faces of Culture Series, Program 7[video recording]. Coastal Community College District in cooperation with Harcourt, Brace College Publishers.

Abrams, I. R., & Bishop, J. (Producer). Womack, M. (Writer). (1994). *Patterns of subsistence: The food producers*, Faces of Culture Series, Program 8[video recording]. Coastal Community College District in cooperation with Harcourt, Brace College Publishers.

Film on Cuban Oil Crisis and Special Period:

Morgan, F., Murphy, E., Quinn, M. (Producer). Morgan, F. (Director). (2006). *The Power of Community: How Cuba Survived Peak Oil* [vidorecording]. Yellow Springs, Ohio: Community Service Inc.