

Spring, 2002
TR 11:30 - 12:45
Olscamp 109

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ENVH 210H
The Global Commons
International Perspectives on Environmental Health and Protection

The goal of this course is to help you gain an understanding of environmental conditions throughout the world, and an appreciation of how culture and economic situation affect responses to and perceptions of environmental quality. After completing the course, students should be prepared to participate in discussing and forming coherent opinions about major international environmental issues.

The course will require active discussion from all students. Typically, class sessions will focus on previously assigned readings - it is **vital** to your success in the course that you read the material **before** the discussion. We will not be looking for general opinions about issues, but ideas generated from thinking **critically** and **creatively**.

Topics include a mixture of social and scientific issues. Perhaps the most ambitious goal of the course is to bridge the seemingly disparate areas of culture, science and technology. The common thread we are seeking is an understanding of how culture influences perceptions of environmental quality, and how environmental conditions influence individual and societal decision making. "Sustainable development" calls for improvement of environmental conditions through economic development in a socially equitable way. In this course we will be discussing environment, economics and social equity from the perspective of a variety of cultures.

To help gain insight into views of people from other cultures, plans are to work directly with companion courses in four other universities: Peking University in Beijing, China; Mendeleev University of Chemical Technology in Moscow, Russia; the University of Veszprém in Hungary and the Autonoma Universidad de Guadalajara in Mexico. We are planning a phone conference with the first three universities using speaker phones. With Mexico, we plan on using a Web based video connection. We hope to interact multiple times with the Autonoma Universidad using the Web, or through individual student dialogues over email.

Each phone conference involves students from both countries studying a common issue, and preparing for questions from one another. Reading and discussion will focus on the appropriate topics prior to the conferences so that we will be well prepared. The conferences take one hour, and you need to be prepared to participate at odd times of the day (reflecting the time differences and the need to find times when everyone is available). The specific topics have not been determined (tentative topics are identified below) but will encompass major global-scale environmental issues. I am hoping to have one topic with China (effects of economic development on the environment), and use a common topic for the three other schools (global climate change). Using a common topic for three different schools is intended to explore the relationship between culture and approach to environmental problem solving by examining the same problem with people in different countries.

Desired student learning outcomes resulting from this course include:

- acquisition of fundamental knowledge about major global-scale environmental issues.
- acquisition of fundamental knowledge about importance of culture to society.
- increased ability to actively engage in critical thinking.
- increased ability to integrate technical information into a social construct.
- increased ability to understand complex issues and acquire new knowledge.
- increased ability to communicate about complex issues in writing and verbally
- increased independent research skills.
- increased ability to work collaboratively

Writing and Presentation Assignments

1. For **each** separate article, chapter, etc. that is assigned as reading, develop one question or challenge of a concept that shows critical examination of the material (there may be some exceptions when no questions are needed). For example, you may find that a conclusion is inconsistent with data presented earlier (or later). Data may be presented in a way as to lead the reader to draw a particular conclusion - doing something as simple as changing the scale of an axis may lead to an entirely different perception. The author may not use data at all to draw a conclusion - critical thinking may indicate the need for fact from which to base a conclusion. The author(s) may talk about a concept (e.g., global climate change) and your question may be based on learning more about that concept (e.g., what do we know about global climate change anyway? Is the author's statement consistent with that knowledge?). Your questions (which must be typed - consistent with everything else in the course) will be collected each class period. We will often use them as a basis for discussion. **Please try to develop them about ideas that you are truly interested in and would like to share with the class.**

2. For **each** reading, prepare one question based on material that was unclear, or that you would like to know more about. These questions are due at the beginning of the class sessions when the reading will be discussed. Please don't ask questions about things that are simple to find answers to (e.g. individual words that can be looked up in a dictionary). If you understand a reading so completely that you have no questions - and it doesn't stimulate you to be interested in a related topic - then you may prepare a second critical thinking question.

3. In class on January 16 we will select articles to read on religion and the environment from the Harvard Forum on Religion and Ecology. Working in teams of two, you will have five minutes to present on January 28 a very brief overview of the basic tenants of one religion and how they relate to environmental quality. No written paper is required

4. Write a two-three page paper taking a point-of-view either that:

- Christianity has been a significant factor in the deterioration of the global environment, or
- Christianity has not been a significant factor in the deterioration of the global environment

Consider in your paper Lynn White's article, *The Historical Roots of our Ecologic Crisis*. This article was fundamental in beginning discussion of the relationship between Christianity and environmental quality (and making many people angry about his point-of-view!). Research other material as appropriate to support your position. A few linkages to rebuttals of White's

arguments are available at the Web sites (documented below) of the "Action Institute for the Study of Religion and Liberty" and the "Fund for Christian Ecology." Currently there is also a movement through a Christian evangelical group to discuss "What kind of car would Jesus drive." Material on this topic is easily found on the web. You are welcome and encouraged to find additional materials, but it is not required.

Your paper needs to include documented citations to articles supporting your position. (Please see me if you are unfamiliar with the process of documentation). The paper is due at the beginning of class on February 4.

This paper will be graded on a 100 point scale. Following initial grading, you will be allowed to respond to suggestions and earn half of the points below 100 points that you did not earn originally (e.g., if your original score was a 90, you could score an additional 5 points - if your original score was a 80, you could score an additional 10 points). Your rewrite must be submitted no later than one week after the original is returned to you.

5. Write a short paper (4-5 pages) comparing agriculture and food for the United States to that of any other region of the world. Use as one of your primary data sources Data Tables AF in The United Nations Development Program, United Nations Environmental Program, World Bank, World Resources Institute. 2000 *World Resources 2000-2001, People and Ecosystems, The Fraying of Life* (UNDP). Please work in teams of two (with a different partner than you worked with for assignment 3). Each team should use a unique region. Please check with me before you start work as a team. The use of graphics (e.g. graphs and charts) is **highly** recommended. This paper is due February 18. Again, the paper may be re-submitted and half of the credit originally not earned may be earned.

6. Prepare a 10 minute presentation comparing energy, resource use, and basic economic indicators of the U.S. to that of any other region of the world (other than a region used for assignment #4). Use as your primary data source Data Tables ERC and EL in UNDP. Please work in teams of three (please change partners from whom you worked with previously). Each team should use a unique region. These presentations will be given February 27.

7. Please calculate your "ecological footprint" following the quiz available at Redefining Progress (<http://www.redefiningprogress.org/programs/sustainability/ef/quiz/>). Please also determine how you would prefer to reduce your personal footprint to your "fair share" (if everyone used this much, we would only need one planet) using the calculation tools available at this site. Bring your data to class for discussion and a written summary table showing what you would reduce. This is due March 6.

8. We hope that we will be able to pair up with students from the Autonoma Universidad de Guadalajara. Working either in groups or individually (it depends on the number of Mexican students participating), write a paper (your part should be between 5 and 10 pages) evaluating an environmental issue from perspectives reflecting culture of the United States and of Mexico.

Please check with me before you go forward with your topic. Collaboration is expected over the internet. This paper is due May 1.

9. Everyone is required to prepare no fewer than five **high quality** questions for each international discussion. These questions should be about the particular topic of the discussion, and be of a nature where the answers can not be easily found in reference materials. For example, a poor question would be what is the current population in your country. A better question would be does the rapidly expanding population in your country affect your personal standard of living?

Writing Style and Submission Requirements

Writing assignments are key to gaining experience in researching complex topics, organizing ideas and documenting findings. In addition to demonstrating knowledge of the topic and critical and creative thinking skills, you are expected to demonstrate adequate writing abilities to effectively transmit the information. For research papers, all information should be based upon facts that you cite from reliable sources. Be sure that your arguments are internally consistent, and consistent with known facts. Opinions carry little weight if they can easily be shown to be inconsistent with past or existing conditions.

For team projects, each member of the team will receive the same grade. Please see me if conflicts arise.

All papers should have one inch margins all around, using 12 point type and double spacing. Citations should be made using the author, date system.

Timeliness and Make-ups

This course schedule will be varying considerably from that detailed below, due to the complexities inherent in working with a variety of international colleagues. It is your responsibility to stay current with the changing schedule. If you are confused about the schedule, call or email me. Submitting papers late will carry a penalty of 2 grade per day. Written questions will not be accepted late..

Exceptions will be made to these policies providing you have a good reason discussed with the instructor prior to the due date. For example, explaining just prior to class that you got too busy to finish a paper would not be an acceptable reason. If you've got a time conflict with a due date, turning material in early usually is fine! The key to any request is having a good reason, and planning ahead.

Other Graded Requirements

A final examination will be given. It will consist primarily of essay type questions designed to allow you to demonstrate conceptual understanding through discussion of major issues.

Your active participation is expected and counted as a component in determining your course grade. Quizzes may be given if needed to encourage reading and participation

We may have other assignments and our interactions with the international universities may change from that planned. In that event, the grading distribution (as detailed below) and other responsibilities may change. Be sure to ask me if you have any questions

Grading

Questions from reading	5%	Religion presentation	3%	
Christianity” paper		10%	Agriculture paper	15%
Energy paper		15%	Ecological Footprint	2%
		Mexico collaboration@ paper	20%	Inte
Final Examination	20%	Participation		5%

Required Reading

Hardin, Garrett, 1968. The Tragedy of the Commons. *Science*, 162:1243_1248.

Available on the Web at: <http://dieoff.org/page95>

Harvard Forum on Religion and Ecology. Available on the web at:

<http://environment.harvard.edu/religion/main.html>

Hertsgaard, Mark, 1999. *Earth Odyssey, Around the World in Search of Our Environmental Future*. Br

Naess, Arne, The Deep Ecology Platform. Available on the Web at:

<http://dhushara.tripod.com/book/renewal/voices2/dpecol.htm#anchor1215022>

Intergovernmental Panel on Climate Change. Summaries for policy makers. Available on the web at: <http://www.ipcc.ch/>. Summary for policy makers available at:

<http://www.ipcc.ch/pub/SYRspm.pdf>

Population Reference Bureau’s Reference Handbook, 4th edition. Available on the web at:

http://www.prb.org/Content/NavigationMenu/PRB/PRB_Library/Population_Handbook/PopHandbook_Eng.pdf

Redefining Progress. Available on the web at:

<http://www.redefiningprogress.org/programs/sustainability/ef/quiz/>

Smart Growth Online. Available on the web at: smartgrowth.org/about/issues/issues.asp?iss=4

Talloires Declaration Available on the web at: <http://www.ulsf.org/pdf/TD.pdf>

United Nations Environment Program (UNEP). Global Environment Outlook 3.

Available on the web at: <http://www.unep.org/geo/geo3/english/pdf.htm>

United Nations Development Program, United Nations Environmental Program,

World Bank, World Resources Institute. 2000. *World Resources 2000-2001*,

People and Ecosystems, The Fraying of Life. Elsevier Science, Kidlington,

Oxford, U.K. Available on the web at: <http://www.wri.org/wr2000/>. Data

tables can be downloaded by clicking first on the Table of Contents, and then obtaining as a PDF file.

Wackernagel, Mathis, Chad Monfreda, and Diana Deumling, November 2002.

Ecological footprint of nations, November 2002 Update How Much Nature Do

They Use? How Much Nature Do They Have? Available on the web at:
<http://www.redefiningprogress.org/publications/ef1999.pdf>

White, Lynn 1967. The Historical Roots of our Ecologic Crisis. *Science*,
155:1203-1207

Available on the web at: http://www.iyume.com/nature/eco_crisis.htm

Other materials may be required as needed to meet the needs of the class.

Other Potentially Useful Reference Material

Action Institute for the Study of Religion and Liberty.

<http://www.acton.org/ppolicy/environment/theology/>

Adams, W. M., *Green Development: Environment and Sustainability in the Third World*,
Routledge Publishers, New York, 1990.

Barrett, John and Anthony Scott. 2001. *The Ecological Footprint: A Metric for Corporate Sustainability*. Corporate Environmental Strategy Volume: 8, Issue: 4, December, 2001, pp. 316_325. This article is available through Electronic Journals at BGSU - please see me if you have any questions about accessing this material.

Botzler, Richard G. and Susan J. Armstrong. 1998. *Environmental Ethics, Divergence and Convergence*. McGraw Hill, Boston. (B&A)

Bradford, B. and MA. Gwynne. 1995. *Down to Earth: Community Perspectives on Health, Development and the Environment*. Kumarian Press, Inc., West Hartford, Connecticut.

Brown, Lester , Michael Renner and Brian Halwell, 2000. *Vital Signs 2000, The Environmental Trends That are Shaping our Future*. W.W. Norton and Company, New York. 192 pages. Available at the campus bookstore.

Carley, Michael and Philippe Spapens. 1998. *Sharing the World, Sustainable Living & Global Equity in the 21st Century*. Earthscan Publications Ltd, London. (C&S)

Carlassare, Elizabeth, 2000. Socialist and Cultural Ecofeminism: Allies in Resistance, *Ethics and the Environment*, Volume: 5, Issue: 1, Spring, pp. 89_106.

Convention on Biological Diversity _ Preamble. Available on the web at:

<http://www.biodiv.org/chm/conv/art0.htm>

de la Court, Thijs, *Beyond Brundtland: Green Development in the 1990s*, New Horizons Press, New York, *Ethics of Environment and Development*, J. Ronald Engel and Joan Givv Engel (editors), The University Fund for Christian Ecology. <http://christianecology.org/CarlPope.htm>

GEO 2000. Global Environment Outlook 2000. United Nations Environment Programme.

Available on the web at: <http://www.unep.org/geo2000/index.htm>

Guha, Ramachandra, 2000. *Environmentalism, A Global History*. Longman, An Imprint of Addison Wesley Longman, Inc. New York. 161 pages.

In the U.S. Interest: Resources, Growth, and Security in the Developing World, Janet Welsh Brown (edi

Meyer, William B. 1996. *Human Impact on the Earth*. Cambridge University Press, New York

Office of Technology Assessment, U.S. Congress, *Energy in Developing Countries*, OTA-E-86 (Washingtc

Redclift, Michael, *Sustainable Development: Exploring the Contradictions*, Methuen Publishers, New York,

Silver, Cheryl Simon with Ruth S. DeFries for the National Academy of Sciences, *One Earth, One Future: Our Changing Global Environment*, National Academy Press, Washington, D.C., 1990.

The Global Ecology Handbook: What You Can Do About the Environmental Crisis, Walter H. Corson (ed) United Nations Environmental Program (UNEP). 1999. *Global Environment Outlook 2000*.

Earthscan Publication Ltd., London. Available on the Web at:

(UNEP).<http://www.unep.org/geo2000/english/index.htm>

Water and Sanitation: Economic and Sociological Perspectives, Peter G. Bourne (editor), Academic Press, Inc. Orlando, Florida, 1984.

World Agriculture: Factors Influencing Trends in World Agricultural Production and Trade, United States General Accounting Office, GAO/RCED-89-1, 1989.

World Commission on Environment and Developing, *Our Common Future*, Oxford University Press, New York, 1987.

World Resources, A Guide to the Global Environment, The World Resources Institute, The United Nations Environment Programme, The United Nations Development Programme, and The World Bank. Oxford University Press, New York, Oxford, 1996.

Schedule

Prepare for many changes in this schedule. Flexibility needs to be maintained to allow for working with universities in other countries. Every effort will be made to keep you up-to-date. If you are uncertain about the schedule, **it is your responsibility** to obtain current information by contacting me or talking with other students.

1/14	Introduction - Understanding Global Conditions		
1/16	Environmental Protection and Human Behavior (select religion)	Hardin, Global Commons	
1/21	Overview of Global Scale Environmental Issues	UNEP, pp. 2-27	
1/23	Religion and the Environment	White, Historical Roots	
1/28	Religion and the Environment (assignment #3 due)	Harvard	
1/30	Mexico Conference - topic selection		
	2/04	Mexico project discussion	
		Population Reference Bureau	
		Population (assignment #4 due)	
2/06	Population (continued)	Hertsgaard, pp. 189-220	
	2/11	Local Environmental Conditions	Hertsgaard,
2/13	Air Pollution	UNEP 210 - 239	
2/18	Agroecosystem Case Studies	UNDP pp. 149-162	

2/20	(assignment #5 due) Global Climate Change	IPCC - Summary for Policy Makers	
2/25	The Irresistible Automobile	Hertsgaard, pp. 80-118	
2/27	Energy and Economics (assignment #6 due)		
3/04	Deep Ecology	Naess, Arne	
3/06	Ecological Footprint (assignment #7 due)	Wackernagel	
3/11	Spring Break		
3/13	Spring Break		
3/18	Prepare for China Conference		
3/20	China Conference - Urban Environmental Quality		
3/25	Freshwater	UNEP pp. 150 - 179	
3/27	Urbanization	Smart Growth	
4/01	Preparation for Hungary Conference	prepare questions	
4/03	Hungary Conference – Air Pollution and Development		
4/08	Environmental Security		
4/10	Peace Lecture		
4/15	Biodiversity		
		4/17 International “Greening” of Universities	Tall
4/22	Preparation for Russia Conference		
4/24	Russia Conference – Environmental Literacy	prepare questions	
4/29	Global Outlook	UNEP pp. 328-249	
	(assignment #8 due)	5/01 Mexico Conference – Share Papers	
5/05	Final Examination (10:45 - 12:45)		

Studying Environmental Health at BGSU

This course fulfills a general education requirements for BGSU in the Social Sciences and in International Perspectives. It is offered as a service to the university because of our belief that a well-educated individual must be environmentally literate.

Our Environmental Health Program is one of only 24 programs in the United States recognized by the National Environmental Health Science and Protection Accreditation Council. Our learning outcomes for students are to:

1. think critically and creatively.
2. demonstrate knowledge and abilities useful in the professional workforce.
3. function as a member of an environmental health team in the public or private sector.
4. learn independently over a lifetime
5. fully participate in the art and science of identifying, evaluating and managing environmental factors that can adversely impact the health of humans and their environment.

If you're interested in learning more about majoring on minoring in the Program, just ask any of the program faculty.