

SIGNATURE ROUTING LOG

General Information:

change 131 to 162

Proposal Type: Course Program Other

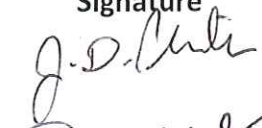



Proposal Name¹ (course prefix & number, pgm major & degree, etc.): GEO 162 (was GEO 131)
Introduction to Global Environmental Issues

Proposal Contact Person Name: Tad Mutersbaugh Phone: 7 1316 Email: tmute2@uky.edu

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Geography Director of Undergraduate Studies	6/8/10	Jonathan Phillips / 7 6950 / jdp@uky.edu	
Geography, Chair (any cross-listing or affected) dpt, chair (any cross-listing or affected) dpt, chair	6/8/10	Sue Roberts / 7 2399 / sueroberts@uky.edu	
A&S Ed. Policy Cmte.	9/21/10	Joanna Badagliacco, Soc. Sci. / 7-4335 / jmb@uky.edu	
A&S Dean	9/21/10	Anna Bosch, Associate Dean / 7-6689 / bosch@uky.edu	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ²
Undergraduate Council	10/26/2010		
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

¹ Proposal name used here must match name entered on corresponding course or program form.

² Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

COURSE CHANGE FORM

Complete 1a – 1f & 2a – 2c. Fill out the remainder of the form as applicable for items being changed.

1. General Information.

- a. Submitted by the College of: Arts and Sciences Today's Date: 5/18/2010
- b. Department/Division: Geography
- c. Is there a change in "ownership" of the course? YES NO
 If YES, what college/department will offer the course instead? _____
- d. What type of change is being proposed? Major Minor¹ (place cursor here for minor change definition)
- e. Contact Person Name: Tad Mutersbaugh Email: mutersba@uky.edu Phone: 7 2931
- f. Requested Effective Date: Semester Following Approval OR Specific Term²: _____

2. Designation and Description of Proposed Course.

- a. Current Prefix and Number: GEO 131 Proposed Prefix & Number: GEO 162
- b. Full Title: Introduction to Global Environmental Issues Proposed Title: Same
- c. Current Transcript Title (if full title is more than 40 characters): _____
 Proposed Transcript Title (if full title is more than 40 characters): _____
- d. Current Cross-listing: N/A OR Currently³ Cross-listed with (Prefix & Number): _____
 Proposed – ADD³ Cross-listing (Prefix & Number): _____
 Proposed – REMOVE^{3,4} Cross-listing (Prefix & Number): _____
- e. Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours⁵ for each meeting pattern type.

Current: 3 Lecture _____ Laboratory⁵ _____ Recitation _____ Discussion _____ Indep. Study _____
 _____ Clinical _____ Colloquium _____ Practicum _____ Research _____ Residency _____
 _____ Seminar _____ Studio _____ Other – Please explain: _____

Proposed: 2 Lecture _____ Laboratory _____ 1 Recitation _____ Discussion _____ Indep. Study _____
 _____ Clinical _____ Colloquium _____ Practicum _____ Research _____ Residency _____
 _____ Seminar _____ Studio _____ Other – Please explain: _____

- f. Current Grading System: Letter (A, B, C, etc.) Pass/Fail
 Proposed Grading System: Letter (A, B, C, etc.) Pass/Fail

g. Current number of credit hours: 3 Proposed number of credit hours: 3

¹ See comment description regarding minor course change. *Minor changes are sent directly from dean's office to Senate Council Chair.* If Chair deems the change as "not minor," the form will be sent to appropriate academic Council for normal processing and contact person is informed.

² Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

³ Signature of the chair of the cross-listing department is required on the Signature Routing Log.

⁴ Removing a cross-listing does not drop the other course – it merely unlinks the two courses.

⁵ Generally, undergrad courses are developed such that one semester hr of credit represents 1 hr of classroom meeting per wk for a semester, exclusive of any lab meeting. Lab meeting generally represents at least two hrs per wk for a semester for 1 credit hour. (See SR 5.2.1.)

COURSE CHANGE FORM

- h. **Currently, is this course repeatable for additional credit?** YES NO
- Proposed to be repeatable for additional credit?* YES NO
- If YES: Maximum number of credit hours: _____
- If YES: Will this course allow multiple registrations during the same semester? YES NO

- i. **Current Course Description for Bulletin:** This course addresses environmental questions of global importance, including population growth, resource consumption, environmental degradation, biodiversity conservation, toxic contamination and environmental justice.
- Proposed Course Description for Bulletin:* This course addresses environmental questions of global importance, including population growth, resource consumption, environmental degradation, biodiversity conservation, toxic contamination and environmental justice. Fulfills Gen Ed Global Dynamics requirement.

- j. **Current Prerequisites, if any:** none
- Proposed Prerequisites, if any:* none

- k. **Current Distance Learning(DL) Status:** N/A Already approved for DL* Please Add⁶ Please Drop

*If already approved for DL, the Distance Learning Form must also be submitted unless the department affirms (by checking this box) that the proposed changes do not affect DL delivery.

- l. **Current Supplementary Teaching Component, if any:** Community-Based Experience Service Learning Both
- Proposed Supplementary Teaching Component:* Community-Based Experience Service Learning Both

3. **Currently, is this course taught off campus?** YES NO
- Proposed to be taught off campus?* YES NO

4. **Are significant changes in content/teaching objectives of the course being proposed?** YES NO
- If YES, explain and offer brief rationale:

No significant changes have been made but the course description for the bulletin has been modified to include the changes in course fulfillments for the General Education program.

5. **Course Relationship to Program(s).**

- a. **Are there other depts and/or pgms that could be affected by the proposed change?** YES NO
- If YES, identify the depts. and/or pgms: _____

- b. **Will modifying this course result in a new requirement⁷ for ANY program?** YES NO
- If YES⁷, list the program(s) here: _____

6. **Information to be Placed on Syllabus.**

- a. Check box if changed to 400G or 500. If changed to 400G- or 500-level course you must send in a syllabus and you must include the differentiation between undergraduate and graduate students by: (i) requiring additional assignments by the graduate students; and/or (ii) establishing different grading criteria in the course for graduate students. (See SR 3.1.4.)

⁶ You must also submit the Distance Learning Form in order for the course to be considered for DL delivery.

⁷ In order to change a program, a program change form must also be submitted.

GEO 131.xxx

Global Environmental Issues

SYLLABUS

University of Kentucky
Department of Geography
Fall 20XX

Class meetings: xx; xx

Instructor: Dr. Tad Mutersbaugh
E-mail: tmute2@uky.edu
 (preferred method of contact)
Phone: 859 257 1316
Office Hours: xx, 1471 Patterson Office Tower

Teaching Assistant/s: xx
E-mail: xx
Phone: xx
Office Hours: xx, location xx

Course Description

This course addresses environmental questions of global importance, including population growth, resource consumption, environmental degradation, biodiversity conservation, toxic contamination and environmental justice. Fulfills Gen Ed Global Dynamics requirement.

Course Content

This course charts environmental questions including **population/resource consumption, biodiversity conservation, toxic contamination, and environmental justice**. Particular attention will be devoted to environmental impacts of agricultural and industrial development, inequality in income and resource use, and the human dimension of human-environment interaction. The **first portion** of the course considers **ideas of nature**, both as they have developed historically and as they have been challenged by contemporary critiques mounted by indigenous peoples and global environmental movements. The **second part** picks up on and seeks to relate and connect the ideas of the '**commodity-chain**' and **biological diversity**. This portion provides tools to analyze the global movement of commodities and resources and explore how this movement *is both connected* to environmental degradation, industrialization, and toxic contamination *and yet also separates* the consumer from the direct experience of the effects of consumption. This 2nd part of the course will take case studies of two issues, **food** and **energy**. The **third and final portion** of the course will take up proposed solutions to environmental degradation. Students will examine two basic strategies to include 'green management' – that is to say strategies based upon environmental management through transnational institutions or multi-lateral agreements – and popular social movements – grassroots efforts to draw attention to and prevent environmental degradation.

Course Goals

Through this course, students will consider and explore ideas of nature, commodities and biological diversity, food and energy and environmental degradation that will enable them to think more thoroughly and critically about global environmental issues.

Learning Outcomes

1. Demonstrate a grasp of the origins and shaping influence of human diversity and issues of equality in this world.
2. Demonstrate an understanding of the civic, and other, complexities and responsibilities of actively participating in a diverse, multiethnic, multilingual world community.
3. Demonstrate an awareness of how individual and collective decision making and civic responsibilities often generate ethical dilemmas, conflicts, and trade-offs that must be thoughtfully evaluated, weighed, and resolved.
4. Demonstrate an awareness of major elements of at least one non-US culture or society, and its relationship to the 21st century context. However, this does not preclude a studied examination of the historical evolution of such issues, or an emphasis upon one prominent time period.
5. Demonstrate an understanding of how local features (economic, cultural, social, political and religious) of urban or rural communities, ethnicities, nations and regions are often linked to global trends, tendencies, and characteristics that often mutually shape one another.
6. Demonstrate an understanding of at least two of the following, as they pertain to the subject matter of the course: a) Societal, cultural, and institutional change over time; b) Civic engagement; c) Cross-national and/or comparative issues; d) Power and resistance

Required texts

Zimmerer, Karl: *New Geographies of Conservation*

Other readings and materials will be made available to students online (see course organization below; each of the readings will be available online)

Course Organization

The course is organized into three parts along the lines noted above. **The first part** concerns learning and analyzing basic global biodiversity and interconnection and how both these features of our world and our understandings of them have changed. Midterm exams will cover each part of the course in turn.

Part Two of the course will assesses the commodity chain, analyze the question of biodiversity – a quality that is as difficult to define as it is important – and arrive at a working definition that will allow students to link specific aspects of commodity consumption to measured biodiversity

loss. This section takes energy development and food production and consumption as case studies, first by assessing food production and consumption and subsequently by looking at energy. In each case every effort will be made to link everyday activities and consumption to global dynamics through student's understanding commodity chains.

Part Three will address potential solutions to the problems of biodiversity loss and global environmental degradation, both in terms of transnational institutional 'policy' frameworks and from a grassroots environmental movement perspective. This will provide students with an opportunity to bring together empirical and conceptual materials through a final research project.

Introduction: Syllabus; Readings; Course Organization

Biodiversity Zimmerer Book Introduction (with special attention to Week 1
Maps: pages 1-35)

IDEAS OF NATURE

Topic 1:	Western Ideas of Nature	Weeks 1 & 2
Ideas of Nature	<u>Glacken: <i>Traces</i></u> <u><i>Glacken: Introduction -- Ideas of Nature</i></u> <u><i>Glacken: Judeo-Christian Ideas of Nature</i></u> <u><i>Glacken: Francis Bacon, Controlling the Earth</i></u> <u>Francis Bacon: <i>New Atlantis</i></u> <u>or <i>New Atlantis on Project Gutenberg</i></u>	
	Non-Western Ideas of Nature	Week 3 Project step 1
	<u>Shoshtak: Nisa's life in the Kalajari Bush (Botswana)</u> <u>Gonzalez: Zapotec Science 'Maize has a soul' (Mexico)</u> <u>Parkes: Fengshui (China)</u> <u>Yoon: East Asian ideas of nature (read second part of article)</u> <u>Iskay Yachay - Two Kinds of Knowledge (Part 1)</u> <u>Iskay Yachay - Two Kinds of Knowledge (Part 2)</u> <u>Iskay Yachay - Two Kinds of Knowledge (Part 3)</u> <u>Iskay Yachay - Two Kinds of Knowledge (Part 4)</u>	
	Darwin	Week 3 Assignment 1 (in-class)
	<u>Gould: <i>The episodic nature of evolutionary change</i></u> <u>Gould: <i>nature's odd couples</i></u> <u>Gould: <i>Darwin's Middle Road</i></u>	
Neo-Malthusiansim versus a Political Economy of Environmental Degradation	Demographic Transitions & Situated Rationalities Erlich: Population Bomb Sen: 100 Million Women are Missing	Week 4

Gender and the Environment	Schroeder R, 1997, Re-Claiming Land in the Gambia: Gendered Property Rights and Environmental Intervention Annals of the Association of American Geographers	Week 4 Exam 1
COMMODITY CHAINS: THINGS IN THE ENVIRONMENT		
Commodity Chains Defined	<u>Gereffi: industrial product commodity chains</u>	Week 5
Dynamics of Habitat Destruction: Making nature a commodity	Commodity-Chains and Commodity Fetishism <u>Gewertz: Lamb Meat Commodity Chains in the South Pacific</u> <u>Cronin 'The Wealth of Nature: Lumber'</u> <u>Cronon: Photos from 'The Wealth of Nature: Lumber'</u> see Gereffi above Movies: Affluenza	Week 5
The Carbon Footprint; Soft Paths, Hard Paths and Global Warming	<u>Herald-Leader: Lexington Carbon Footprint/Brookings Carbon Footprint report</u> <u>Marilyn A. Brown and Elise Logan: The <i>Residential Energy and Carbon Footprints of the 100 Largest U.S. Metropolitan Areas</i></u> <u>Southworth, Sonnenberg, and Brown: The <i>Transportation Energy and Carbon Footprints of the 100 Largest U.S. Metropolitan Areas</i></u> http://www.nature.org/initiatives/climatechange/calculator/ <u>Jesse Ribot: Charcol production in Senegal</u> <u>Susanna Hecht: Deforestation in the Brazilian Amazon</u> <u>Paul Robbins: Trees, Bureaucracy and Modernity in India</u> Global Coal: the Transnational Coal Trade, Colombia versus Appalachia	Week 6 Project Step 2
Nuclear Energy and Decommissioning vs. Sustainable sources	Northern Nuclear Power Nuclear Power in the Global South: Mexico Nuclear fuel cycles and proliferation	Week 7
Solar, Wind, Geothermal, Conservation: The political economy of global renewables	Peak Energy: Articles TBA	Week 8 Assignment 2

FOOD FROM NATURE TO NURTURE

Farm to Plate: the global food chain	Mansfield B, 2003, Fish, factory trawlers, and imitation crab: the nature of quality in the seafood industry JOURNAL OF RURAL STUDIES19(1): 9-21 Pollan M. 2000. The Organic-Industrial Complex	Week 9
Food & Environmental Degradation: Soil Erosion	Political Economy of Soil Erosion and Desertification	Week 10
Intellectual Property Rights, Seeds and the Green Revolution	Kloppenburg & Kleinman. 'Seed Wars: Common Heritage, Private Property, and Political Strategy' (Reader)	Week 10
Ecological agriculture and peasant farming	WinklerPrins in <i>New Geographies of Conservation</i> B Traven: Mexican farmers Padoch: Farmers and Conservation Mutersbaugh: Non-Territorial Conservation	Week 11 Assignment 3
Alternative Strategies for Non-Territorial Conservation	Mutersbaugh Fairtrade-Organic Networks in <i>New Geographies of Conservation</i> Sears, Padoch et al. <u>Sustainable Agriculture in the Amazon</u> Terroir and Food Regions: the EU and the Global South	Week 11 Exam 2

TOXICS AND BIODIVERSITY

Toxics: Nuclear & BioWeapons Testing: Global Dead Zones	<u>Rachael Carson: <i>Silent Spring</i></u> <u>Davis. 'Dead West: Ecocide in Marlboro Country'</u>	Week 12
Toxic Contamination of Biosphere: Overview	Robbins and Sharp. 2003. "Producing and Consuming Chemicals: The Moral Economy of the American Lawn" Economic Geography 79(4): 425-451. Ocean Dead Zones	Week 13 Project Step 3
Epidemiology: Studying Toxics and Workers	Pesticides in the Developing World	Week 14
Waste disposal and export, conventional	Henwood. 'Toxic Banking' Swaney: Summers' Memo UN Climate Report and Valuation of Crops and Peoples	Week 14 Assignment 4 (in-class)

WHAT TO DO? GLOBAL ENVIRONMENTAL MOVEMENTS AND
'ENVIRONMENTALITY'

Green	MacAfee: 'Selling Nature to Save It'	Week 15
Managerialism: 'Selling Nature to Save It' and Fortress Conservation	Hughes, D, (2001) 'Rezoned for business: how eco-tourism unlocked black farmland in eastern Zimbabwe' <u>Journal of Agrarian Change 1(4): 575-99.</u> Homewood K, Brockington D Biodiversity, conservation and development in Mkomazi Game Reserve, Tanzania <u>GLOBAL ECOLOGY AND BIOGEOGRAPHY 8 (3-4): 301-313</u> Sierra in <i>New Geographies of Conservation</i>	
Green	Sundberg in <i>New Geographies of Conservation</i>	Week 15
Managerialism: Conservation and Culture	Sneddon in <i>New Geographies of Conservation</i> Turner in <i>New Geographies of Conservation</i>	
Pollution	Bullard 'Anatomy of Environmental Justice' (Reader)	Week 16
Politics and Social Justice	Swaney 'So What's Wrong with Dumping on Africa?' (Reader) Pearce. 'Price of life sends temperatures soaring' (Reader) Pulido L, 2000, Rethinking environmental racism: White privilege and urban development in southern California <u>ANN ASSOC AM GEOGR 90 (1): 12-40</u>	
Environmental Social Movements, Indigenous and Peasant Resistance	Zapatista Web Site: www.ezln.org Chico Mendes: Amazon Rubber-Tapper's Union <u>Chico Mendes: Fight for the Forest</u>	Week 16 Project Step 4 and Final Project Due Last day of class

*******Finals Week: Exam 3*******

Final Exam Date:
Time:
Duration:
Location:

Course Policies (Required syllabus material)

If you have a documented *disability* that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257 2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Attendance simply **MUST** be a priority if you wish to do well in this class. Students are expected to attend ALL classes and to take notes.

The Academic Ombud states that students are entitled to an excused absence for the purpose of observing their major *religious holidays* if the instructor is notified by the university deadline for this semester.

The only other excused absences are a documented serious illness, the documented illness or death of family member, and official documented University-related trips.

All work must be submitted on or before the deadline (day and time) specified for each. *Late work* will not be graded.

The Academic Ombud is responsible for dealing with cases of *plagiarism* and *cheating*. Make sure you know how these offenses are defined and what the minimum punishment for either is. You will find this information in your copy of Students Rights and Responsibilities. Be warned that I take such offenses very seriously and have taken students who have plagiarized or cheated through the official prosecution procedures in the past.

If you are having problems with the course material or with an assignment, or you just seem to be getting behind with your work, PLEASE come and see me sooner rather than later. Don't wait until things get out of hand. If you cannot come to see me during my scheduled office hours, speak to me or our TA before or after class and we can arrange an appointment. Of course, if you are not having a particular problem but just want to chat about the course or any issues it raises for you, you are also welcome to come and see me during office hours. You can also reach me by phone at the office or by e-mail. I check my answering machine and e-mail fairly regularly.

Assessing students' learning/mastery of core competencies

Summary of Grading:

Exams	45%
Assignments	
In –Class	10%
Take Home	20%
Project	25%

Grading Scheme:

Letter Grade	Grade achieved in course	UK Letter Grade Definition
A	90-100%	Represents an exceptionally high achievement as a result of aptitude, effort and intellectual initiative.
B	80-89%	Represents a high achievement as a result of ability and effort
C	70-79%	Represents average achievement
D	60-69%	Represents the minimum passing grade
E	0-59%	Represents unsatisfactory performance and indicates failure in the course

NOTE: Students will be provided with a **midterm evaluation** based on course performance up until the midterm point following syllabus criteria.

Exams (45% of total course grade)

There will be three exams: two midterms and a final. The exams will, depending on the number of students in the course and the TA help assigned to the instructor, be a mix of short answer and multiple choice questions. They will not be cumulative. Rather, each will cover the material from one third of the semester. Each exam is worth 15% of the total course grade.

Assignments (55 % of total course grade)

If student numbers and TA assistance levels permit, there will be **two short in-class (5% each) and two take-home assignments (10% each)** worth 30% of the total course grade. These will be developed from the exercises described below. Learning outcomes and grading rubrics for each will be developed.

SEMESTER PROJECT

A **semester project worth 25% of the total course grade** will connect conceptual understanding to practical issues. It directly relates to the learning outcome: “Students will demonstrate an understanding of the complexities of citizenship and the process for making informed choices as engaged citizens in a diverse, multilingual world.”

For the final project, each student will complete a series of steps as part of researching an issue and organizing and presenting an analysis of the issue.

Semester Project Step one: (2%) Students will identify a site with an important environmental conflict: this site must be located outside of North America. They will provide a 1-page write-up that identifies the cause – that is to say the issues at stake – of the environmental conflict, the locale, and the actors involved in the conflict. Students will provide a short biography listing five information sources that the student has in hand.

Learning objective: Students will learn to identify an environmental problem and assess diverse informational sources on this issue of global significance, and to select robust (reliable, trustworthy, complete, accurate) and appropriate (not too detailed, not too simple, etc) information.

Semester Project Step two: (5%) Students will provide a five-page description of the environmental conflict, the actors involved, and the locale in which the problem is located. This write-up must identify scientific data that support the contention that environmental damage will result and provide an overview and time-line of the development of the environmental conflict that explains why this conflict is difficult to resolve.

Learning objective: To hone research skills through the clear, well-organized, and concise presentation of the basic facts concerning a complex issue.

Semester Project Step three (5%): Commodity-Chain analysis. This step will relate the environmental conflict to processes of consumption, militarism, or other activities based in or promoted by the US (or other developed nation) or a US-based transnational corporation.

Learning objective: To make connections between a particular issue and specific actions that may indirectly be a cause of the conflict or make the conflict difficult to resolve. This will be a chance for students to consider the basis for and importance of civic and political engagement.

Semester Project Step four (10%): Solutions. Using the information gathered in the previous steps, imagine that you are a mediator sent in to resolve this environmental conflict. Write a 5-page paper that proposes a solution to the conflict: this may involve regulation, remediation, or other solutions – such as providing cleaner technologies or mounting an international grassroots campaign to stop the environmentally destructive practice. This proposal should set out a clear strategy and provide a convincing rationale for your approach.

Learning objective: To craft a sound, well-researched and persuasive argument about action that could be taken in regards to an environmental issue.

Semester Project, Final Presentation (3%): The completeness and corrections to previously handed in sections will be taken into account in assigning a final presentation grade to the whole of the semester project.

The semester project is an iterative assignment that will develop the student's ability to think about the problems and concerns of global environmental citizenship. Feedback on each assignment will allow students to assess their performance and make adjustments.

The grading scheme for all exams and assignments will be based on 90% or above for an A, 80-89% for a B, 70-79% for a C, 60-69% for a D, and 59% or below a failing grade. Students will be informed of their grade by the official Midterm date.

ADDITIONAL ASSIGNMENTS

Additional assignments will focus on class readings to allow students an opportunity to develop a fuller conceptual and practical understanding of key course content.

PART ONE: ASSIGNMENT ONE

Changing conceptions of nature

(Assignment under construction, I will consult with colleagues to refine this assignment). This will be an in-class assignment in which students will select a specific perspective on nature from those presented in the class readings and debate this view with respect to a specific global environmental issue (chosen beforehand by the class from a shortlist). A rubric – based upon Glacken's *Traces on the Rhodian Shore* and contemporary sources – will provide a set of debating perspectives and points. A final rubric will be set prior to the debate and include issues such as harmony in nature, design versus evolution, and the role and responsibilities of humans

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to nature. After a period of debate, students will write up their positions and address counter-arguments around a selected topic (out of the handful of pre-determined debating points). This will be typed and handed in at the next class meeting.

PART TWO: ASSIGNMENT TWO

Carbon and Ecological Footprints

Goal: Compare the carbon footprint of two cities, one located in the US and another located in a 'less developed' country of the Global South. Examine the relative impacts of Residential Consumption, Transportation, and Urban Form on the comparative Carbon Footprints. We will select three cities with which to make comparisons, one each in Latin America, Africa, and Asia.

Carbon and Ecological Footprints
Assignment 2

Global Environmental Issues

Goal: Compare the carbon footprint of two cities, one located in the US and another located in a 'less developed' country of the Global South. Three groups will examine the relative impacts of Residential Consumption, Transportation, and Urban Form on the comparative Carbon Footprints. We will select three cities with which to make comparisons, one each in Latin America, Africa, and Asia. Sample global city assignment below compared with Lexington:

City?:	DAKAR, SENEGAL Versus Lexington, Kentucky	
General:	Carbon intensity of fuels and energy sources; Cost of fuels used in the city/region: cooling and heating degree days:	
	What is the GMP (Gross Metropolitan Product)? What does it mean to 'normalize' carbon footprints by GMP?: should this measure be used with respect to carbon intensity? If so, how to compare economies?	
Housing	Metropolitan Area's urban form	Transportation
What types of energy to people use? Electricity and other energy prices: Fuel price data: Government subsidies:	a. Population density: persons per acre of developable metropolitan land b. housing density, housing units per acre of developable metropolitan land: c. Single versus multi-hub cities	How to people get around? VTM: vehicle transport miles Fleet Composition of Automobile ownership Fuel Type Distance traveled
How do people live? Types of houses and impact upon energy utilization.	a. job density, number of jobs per acre of developable metropolitan land: b. Population concentration: 'evenness' of population distribution across metro area. Qualitative analysis of urban form.	Mass Transit Effect: how many people use mass transit in the city, what type of mass transit exists, what type of fuel is used, what areas are served by mass transit.

Assignment Two Learning outcomes and Skills Development: It is a signal fact that *Lexington Kentucky is possessed of the largest per capita carbon footprint out of the 100 largest US metropolitan areas*. Students will assess how personal energy consumption compares between Lexington and a developing world city, address the problem of global inequities, and study the relative importance of personal responsibility (e.g., turning down a thermostat) versus structural factors (poor local building codes) to reducing global carbon emissions. Students will examine the environmental impacts by comparing ‘upstream’ (mountaintop removal in Appalachia; deforestation from charcoal production in Senegal) with ‘downstream’ (global warming, ocean acidification) caused by fossil fuel consumption.

PART TWO: ASSIGNMENT THREE

Food commodity-chain

Topics: Food traces a path from farms, fisheries or fields to plates, yet we do not often stop to think about the environmental effects of this food, either upstream or downstream. In this assignment students select a basic food item and explore the conditions of its production, transshipment and processing. Students will apply the commodity-chain analytical framework developed in this and the previous sections (of part 2 of this course) to assess food environmental impacts and social-distributional (global) inequalities.

Learning outcomes: With regard to global citizenship, students are encouraged to think along two lines. First, what is the environmental cost of food? Food items are often sent at great energetic expense across vast distances to displace other, often similar items (think bottled water), and, in addition, food production may bring environmental consequences from (over)application of fertilizers and biocides and use of genetically-modified organisms. Second, what are the ethics of displacing basic foodstuffs with export production and shipping this food away from hungry (food-deficit) areas to wealthy, food-rich areas? In developing commodity-chain analysis skills, students will gain a means by which to frame ethical and environmental questions.

A second, equally important outcome will be to develop students ‘geographical imaginations’. Commodity-chain analysis may be used to trace impacts of consumerism on the environment that are otherwise invisible, allowing us the opportunity to raise questions regarding the origin of products that we purchase. We may learn to ask – and to find where to seek information about – how an item is produced, whether by well-paid workers protected from toxic compounds or by poorly paid workers exposed to environmental poisons, to think forward and backward along the commodity-chain and question connections. This may allow more responsible consumer and producer decisions.

Draft assignment on following page

Food Commodity-Chain Assignment:

Consider how your food item affects the environment. Using a commodity-chain analysis (as detailed in class), trace your product through time and space and note environmental interactions along the way that directly or indirectly degrade or contaminate the environment.

I. Trace your Food Commodity Chain: a commodity chain is the time-space path traced by a product as it moves from the site(s) or origin to point(s) of production and finally to a place of consumption. All products are part of commodity chains. Imagine a pencil, for example. Sites of origin are the mines producing graphite and metal, trees producing wood, oil wells producing paint components and erasers, etc. 'Upstream' production sites are the factories processing these raw materials; 'downstream' production sites are factories assembling pencils from these components and packaging them for sale. Final sites of consumption are stores that sell pencils, and finally the location where you write an essay.

At each step in the commodity chain, the pencil interacts with the environment. Trees are cut, waste materials are discarded, workers are exposed to toxics, e.g., pencil paint, graphite dust, resources are used to process the goods, e.g. washing, or electric illumination of the factory and store. Pencil production may indirectly contaminate the environment as workers build new housing, dump domestic waste into sewers, and quit activities beneficial to the environment. You need to trace out the commodity chain connected with your 'product' and identify relevant environmental interactions.

In some cases your class project involves an institution rather than commodity production. In any case you must explore how the operation of this institution, e.g., the creation of a 'product', e.g., students', affects the environment. In cases where the institution is meant to improve environmental quality, it might be more appropriate to explore how the institution will reform existing *and specific* environmentally destructive practices by, for instance, training students or administrators.

II. Identify environmental degradation created by your project.

A. **Direct degradation:** your project brings a new process or activity, for instance deforestation, cattle ranching, furniture-making, agroforestry, which destroys or supplants, or removes an existing component of the biotic environment.

B. **Indirect degradation:** your project removes either labor or a resource which is essential to activities which currently protect the environment. People may, for instance, participate in your project rather than undertake important environmentally conserving activities.

III. Identify toxic contamination in your project

Toxic contamination includes, in this assignment, any activities which contaminate the environment with human-produced toxins, whether biotic (sewage), inorganic (heavy metals, asphalt) or carbon-based (solvents).

IV. Identify the 'Food Ethics' of your food item:

Food items are often shipped from 'food deficit' to 'food surplus' regions. Using the Atlas of Hunger, determine whether your food originates in a 'food deficit' area, and address the following questions:

i. What are the arguments for and against this trade? ii. what other alternatives exist? iii. does production of your food item displace the production (or harvesting) of alternative foods that might be locally consumed? What is your overall assessment?

PART THREE: ASSIGNMENT FOUR*Toxic Contamination and Biodiversity*

This will be an in-class assignment in which students identify a form of toxic contamination and discuss its effect on biodiversity. The point will be develop analytical specificity with respect to toxic compounds, mechanisms of action, and effects on biodiversity. I hope to run this as a field trip or in-class laboratory in which we (ideally) travel to a site where we can see the effects of a compound (which could also be something such as a lawn fertilizer or herbicide) on biodiversity.

Possible Toxics Topics:

Fertilizer contamination

Biocides (pesticide, herbicide, fungicide)

Acid Rain

Particulates (of say, coal burning from the University Power Plant)

Waste Runoff and debris (e.g., Mountaintop Removal)

Trash (e.g., Landfills, plastics)

Oil or other mineral exploration and processing effluvia

Choose from one of these or other toxics issues.

Learning outcomes and Skills:

There will be two intermediate learning outcomes and one 'synthetic' outcome. First, students will be asked to think about mechanisms of action. Each different toxic compound – and some such as fertilizer not usually thought of in this manner – has a unique mechanism of action that differentially affects biodiversity. Second, students will consider – and I hope gain practical appreciation of – the problem of biodiversity measurement in the field. Finally, as a 'synthetic' outcome, students will be encouraged to consider the multiplicity of ways in which toxic compounds affect biodiversity, both directly *and* indirectly, by not only by harming a species but also by favoring one species or vegetation type at another's expense.

General Education Course Submission Form

Date of Submission: 1 June 2010

1. Check which area(s) this course applies to.

Inquiry - Arts & Creativity	<input type="checkbox"/>	Composition & Communications - II	<input type="checkbox"/>
Inquiry - Humanities	<input type="checkbox"/>	Quant Reasoning - Math	<input type="checkbox"/>
Inquiry - Nat/Math/Phys Sci	<input type="checkbox"/>	Quant Reasoning - Stat	<input type="checkbox"/>
Inquiry - Social Sciences	<input type="checkbox"/>	Citizenship - USA	<input type="checkbox"/>
Composition & Communications - I	<input type="checkbox"/>	Citizenship - Global	<input checked="" type="checkbox"/>

2. Provide Course and Department Information.

Department: Geography

Course Prefix and Number: GEO 131 becomes GEO 162 Credit hours: 3

Course Title: *Introduction to Global Environmental Issues

Expected Number of Students per Section: 126 Course Required for Majors in your Program? No

Prerequisite(s) for Course? None

This request is for (check one): A New Course An Existing Course

Departmental Contact Information

Name: Tad Mutersbaugh Email: mutersba@uky.edu

Office Address: 1457 POT Phone: 7-2931

3. In addition to this form, the following items are required for consideration:

- A syllabus that conforms to the Student Learning Outcomes.
- A narrative (2-3 pages max) that will address the General Education and Course Template Learning outcomes. The type(s) of course assignment(s) that could be used for Gen Ed assessment.
- If applicable, a major course form for an existing course, or a new course form for a new course.

Summer 2009 approved under GEO 365 - xxx spec TP: same title possibly minor change

4. Signatures

Department Chair: [Signature] Date: 6/1/2010

Dean: Anna R. K. Bosch [Signature] Date: 9/21/10

College Deans: Submit all approved proposals electronically to:
Sharon Gill Sharon.Gill@uky.edu
 Office of Undergraduate Education

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UNIVERSITY OF KENTUCKY
DEPARTMENT OF GEOGRAPHY

Semester 20XX
Professor Tad Mutersbaugh

GEOGRAPHY 131: GLOBAL ENVIRONMENTAL ISSUES

Dear Evaluation Committee Members:

I am pleased to (re)submit this course, intended as a contribution to the ‘**Global Dynamics**’ portion of the new General Education Curriculum, for your further consideration. To clarify, this course has been taught once before under a different ‘placeholder’ course number (GEO 365) but now the EPC has approved the current course number. I have reworked the course based upon the new Gen Ed templates and on my evaluation of last years’ course offering. I am on sabbatical this year out of town and so have been unable to attend the workshops (and thus I hope you will forgive my inability to respond explicitly to the ‘artifacts’ aspect of the course evaluation template).

I am providing a full course syllabus including assignments and semester project outline, a full list of readings, and a general description of the flow of the course. I address learning outcomes in the included syllabus, but let me take this opportunity to address each of the design principles listed on the General Education Course Rubric for Learning Objective Four.

- i. Critical thinking skills: This course introduces students to three specific critical skills.
 - a. Students will learn to assess differing intellectual and cultural contributions to varied ‘views of nature’ and evaluate their impact upon contemporary environmental conflicts.
 - b. Students will learn how to apply a ‘commodity-chain’ analysis to analyze the movement and environmental and social impacts of global trade
 - c. Students will learn of the difficulties and importance of analyzing ‘biodiversity’, a multifaceted quality that is as difficult to quantify and measure as it is important.
- ii. 30 hours: Not Applicable
- iii. Identify and Strengthen Gen Ed and Major connections: Students will learn how the study of environmental thought, commodity-chain analysis, and biodiversity evaluation relate both to long-standing geographical studies of people and the environment and also to core general education objectives such as analytical skills development, deepening understandings of global citizenship, and appreciation of cultural diversity.
- iv. Smooth transition to college: The elements of intellectual history, contemporary conflict, and socio-economic and environmental analysis are combined in this course in a manner that is unique to the collegiate arena. However, students should be familiar with each aspect from a high school experience.
- v. Attention to Communication and Quantitative skills: This course combines elements such as in-class debate and essay writing with quantitative exercises such as carbon footprint and commodity-chain analysis. I would rate this duality as a strength of this course.
- vi. Global Citizenship: This course uses both qualitative (environmental thought across culture and history) and quantitative (carbon footprint, commodity chains) exercises to raise fundamental ethical questions regarding the effect of *individual action* and also of *structural social and economic factors*, that lead to inequities in

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environmental justice and the distribution of benefits and responsibilities for environmental issues.

- vii. Systematic Assessment: I specify learning outcomes and offer a set of exercises, such as debates, commodity-chain analysis, carbon footprint analysis, biodiversity analysis, semester project covering an environmental conflict that will permit an assessment of student's learning. However, I am uncertain of the particulars of how the committee proposes to explicitly link assessment and outcomes and welcome input (as on all other points!) in the event that I am found to be deficient on this point.
- viii. Learning Outcome #4 Criteria 1, Cross-cultural competency: This course opens with an explicit section that will examine differing global cultural views – of indigenous peoples, peoples of other nations – with respect to environmental thought. I also look at the intellectual history of 'western' thought for, as an historian might say, 'the past is another country'. In the case of environmental thought this past has left a strong imprint on the western psyche (as demonstrated by Glacken's *Traces*).
- ix. Learning Outcome #4 Criteria 2, Diversity and Social Justice: The 'semester project' course component, 25% of the final grade, is focused specifically on this point of diversity and social justice. Students will be asked to pick and assess an 'environmental conflict' and link it to economic and social processes such as consumption and/or other interests (e.g., military action) of the global north. A special point is placed on conflicts that bring together environmental and socio-cultural conflicts, such as oil drilling on indigenous lands. In addition, the course will raise questions in the food and energy sections to address global inequities between resource-rich and –poor areas, such as food-deficit or energy-deficit areas.

This course will, it is hoped, provide students with critical analytical tools that will help them to meet future life challenges and **become a competent global citizen** by better understanding the global impact of local actions and the importance of addressing, both personally and politically, the consequences of individual and collective action.

Again I thank you for your attention to this course – which I hope to teach next fall – and welcome your feedback.

Sincerely,

Tad Mutersbaugh
Associate Professor of Geography