

Geography 3400 -- Environmental Geography

Spring Semester, 2010
TR 10:00-11:20 AM, SC 127

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Office Hours: daily 9-10 AM
(or by appointment)

Physical geography examines the physical world, including the atmosphere, lithosphere, biosphere, hydrosphere, and pedosphere, and their interactions. Human or cultural geography explores the human world, including such things as population, language, customs, economics, politics, and religion. Environmental geography seeks to understand interactions between the human and physical worlds in an area we call conservation of natural resources.

The goal of Geography 3400, Environmental Geography, is threefold. First, in order to evaluate issues, we will gain a basic understanding of their underlying principles in their spatial perspective. Second, we will examine the issues themselves in that perspective. Third, we will learn to evaluate issues objectively. There is more than one point of view on almost any issue. In order to be truly educated we must learn to objectively evaluate all points of view. When you read something, ask: "What do we know about the organization that published the piece? What do we know about the author? What is their objective, motive, or agenda?" For example, consider the differences between a discussion of northern forests by an environmental group and the logging industry. How can we say that one is right and the other wrong, especially if we do not understand all of the facts or facets of the issue? Are we considering short-term or long-term goals, and might they be compatible? Our goal is to understand basic principles and to learn to objectively evaluate what we read and hear about environmental issues so that we can make educated rather than emotional decisions.

Course Learning Objectives and Expected Outcomes

By the end of the course, each student will know and understand:

1. How human actions modify Earth's physical environment and the role of technology in that modification,
2. The significance of global impacts of that modification,
3. How physical systems affect human systems,
4. How changes in the physical environment can diminish its capacity to support life,
5. The changes that occur in the meaning, use, distribution, and importance of natural resources, and
6. That every issue has more than one valid point of view. How can we say which is right and which is wrong?

Therefore, each student will:

1. Recognize all sides of environmental issues and evaluate those issues based on all available information.
2. Evaluate the role of technology in environmental modification,
3. Analyze the relationship between human population numbers and distributions on one hand and environmental modification and resource use on the other hand.
4. Develop possible solutions to environmental problems.

Texts

1. (Required) *Exploitation, Conservation, and Preservation, 4th edition*, by Cutter and Renwick.
2. (Required) *Student Atlas of Environmental Issues*, by Allen.

The following volumes are on 2-hour reserve in the library:

1. *The Closing Circle*, by Commoner.
2. *The Environmental Policy Paradox*, 2nd edition, by Smith.
3. *Taking Sides: Clashing Views on Environmental Issues*, by Goldfarb.

Examples of how to present an issue in your essays and term paper. Shows how to balance your papers among the various viewpoints.

4. *Managing the Commons*, by Hardin and Baden.

Web Pages

As you research environmental issues you will find an abundance of web pages on almost any topic. You will find pages from government agencies, private organizations, and individuals. Be aware that many of them carry a narrow point of view they are not timid in expressing. Please use them with caution and balance. As with anything in print, you must evaluate not only the information but also the author to determine whether they have a personal agenda. With that in mind, here are four to help you get started.

www.epa.gov/superfund/

The U.S. Environmental Protection Agency's Superfund page. Look at the rest of the EPA page also.

www.scorecard.org/

The Environmental Defense Fund lists polluters in almost every specific part of the country. You can enter your home zip code and get information about air or water polluters in your home town or county, including what and how much of specific pollutants they produce.

www.sierraclub.org/

This is the Sierra Club home page, the oldest environmental organization in America. The

Tentative Schedule

<u>Week</u>	<u>Readings</u>	<u>Topics</u>
1 (Jan 4-8)	Cutter, Chapters 1-2 Commoner, Chapter 2	Introduction to Environmental Geography, Resource Economics (<i>Read Commoner, Chapter 2 and other sections that interest you</i>)
2 (Jan 11-15)	Cutter, Chapters 2-3 Smith, <i>Paradox</i> , Chapters 1-4	Resource Economics, Environmental Policy (<i>Read Smith, Chapters 1-4 and other sections that interest you</i>)
3 (Jan 18-21)	Cutter, Chapter 4	Ecology
4 (Jan 25-29)	Cutter, Chapter 5	Population
5 (Feb 1-5)	Cutter, Chapter 6	Exam 1 , Agriculture and Food Production
6 (Feb 8-12)	Cutter, Chapters 6-7	Agriculture, Forests
7 (Feb 15-19)	Cutter, Chapters 7-8	Forests, Biodiversity
8 (Feb 23-26)	Cutter, Chapters 8-9 Hardin, Chapter 3	Biodiversity, Marine Resources (<i>Read Hardin, Chapter 3, The Tragedy of the Commons</i>)
9 (Mar 1-5)	Cutter, Chapter 10	Water Quantity and Quality
10 (Mar 8-12)	Cutter, Chapter 11	Exam 2 , Air Quality
11 (March 15-19)		Spring Recess
12 (Mar 22-26)	Cutter, Chapters 11-12	Air Quality, Atmospheric Change
13 (Mar 29-Apr 2)	Cutter, Chapters 13-14	Non-fuel Resources, Energy Resources
14 (Apr 5-9)	Cutter, Chapters 14-15	Energy Resources, Sustainability
15 (Apr 12-16)		Student Reports
16 (Apr 19-23)		Student Reports
17 (Apr 26-30)		Final Exam, April 29, 11:00 A.M.

General Course Information and Course Policies

1. Each student is responsible for his or her own progress in this course. That is why I stress attendance, participation, and office visits. See #7, 10, and 14 below. ***If you receive a score of less than 70 on any exam, I expect you to visit me in my office promptly.*** The purpose of this visit is to allow me to help you work out any problems you might have and to help you prepare for subsequent exams. Timely visits may earn you bonus points.
2. **Grading:** Essays 7% (50 points), exams 44% (300 points), term paper OR oral presentation 26% (125 points), quizzes and exercises 15% (100 points), field trip participation 7% (50 points). 625 total points possible.
 - A. Two essays (25 points each of which will explore **all sides** of an environmental issue of local, national, or global concern. Each essay will cover either a topic currently being discussed in class, one currently in the news, or another of your own choosing about which you would like to learn more. They will require research above and beyond the text. A few topic suggestions are listed below. No bibliography is required. Each paper will be no less than two nor more than four typed pages in length, plus any graphics you may wish to include. Use *Taking Sides*, by Goldfarb, for format ideas. You may expand one of your essays into your term paper if you wish. Essays are due **February 11, April 1**. ***Don't tell people they are ignorant, uneducated oafs, stupid, fearful of knowledge, etc., just because they have a different point of view. Most people have reason for their beliefs that deserve careful thought and examination. Respect them for that, even if you disagree.***
 - B. Three Exams, 100 points each.
 - i. **February 2** - Cutter Chapters 1-5, *Closing Circle*, by Commoner, *Paradox*, by Smith.
 - ii. **March 9** - Cutter Chapters 6-10, Hardin, *Managing the Commons*, chapter 3.
 - iii. **April 29, 11:00 A.M.** - Cutter Chapters 11-15 and student oral presentations.
 - C. Term Paper OR Oral Presentation on an environmental topic of **local or statewide concern** (See list below for topic suggestions. 125 points). Follow these guidelines:
 - i. Paper - at least ten pages of text, plus bibliography consisting of at least eight to ten sources. Graphics, such as maps, tables, etc. will be included in an appendix.
 - ii. Structure: Title page, introduction, arguments for **all sides** of the issue (*I stress: all sides of the issue*), defense of your personal point of view, summary and conclusions, appendix, references cited. The appendix will contain maps, photographs, charts, graphs, tables, and other illustrative materials. Use *Taking Sides*, by Goldfarb (on reserve in the library), for format ideas.
 - iii. Oral Presentation -- approximately 20 minutes. Test questions will come from the presentations.
 - iv. A short statement or paragraph describing your chosen topic is due on **January 14**. This is not optional. Points will be

deducted if this statement is not submitted on time. The purpose is to get you thinking of your topic early and to ensure that we do not duplicate a topic in the oral presentations.

v. A typed rough draft is strongly encouraged sometime near the end of March or beginning of April. I will review it and give you suggestions for your final paper.

vi. Final typed paper is due **April 22**. Up to 50% may be deducted for late papers. Nothing will be accepted after April 29.

vii. Papers must be your original work. Papers purchased or duplicated from internet or other sources will not be accepted.

D. Five Quizzes and Exercises, 20 points each (see calendar). These may be an in-class quiz or a homework exercise.

E. Field trip participation. We will schedule a field trip later in the semester. Attendance is mandatory. Trip logistics will be discussed later. Your course fee pays transportation costs.

F. Grading schedule (figures are percentage of total possible):

		87-89	B+		77-79	C+		67-69	D+		
94-100	A	84-86	B		74-76	C		64-66	D		below 60 F
90-93	A-	80-83	B-		70-73	C-		60-63	D-		

3. *Please bring your atlas to class each day. We will use them extensively in class discussions, exercises, quizzes, and exams.*
4. Exams and quizzes may be rescheduled only with a valid excuse and only by prior arrangement. Exam questions will come from the textbook and lectures, while quizzes will concentrate on reading material. Exams and quizzes are open atlas, but not open (text) book. Please refer to the study guide at the end of this syllabus for study suggestions.
5. Academic Integrity Policy: Scholastic dishonesty will not be tolerated and will be prosecuted to the fullest extent. You are expected to have read and understood the current issue of the student handbook (published by Student Services) regarding student responsibilities and rights, and the intellectual property policy, for information about procedures and about what constitutes acceptable on-campus behavior.
6. Students with medical, psychological, learning, or other disabilities desiring academic adjustments, accommodations, or auxiliary aids will need to contact the Southern Utah University Coordinator of Services for Students with Disabilities (SSD), in Room 206F of the Sharwan Smith Center, or phone (435) 865-8022. SSD determines eligibility for and authorizes the provision of these services and aids.
7. **Regular attendance and participation is required.** I will take roll. History has demonstrated a very close correlation between attendance and exam and quiz scores. Missing more than one class period may result in a lowered grade, because many learning activities are completed in class. *You cannot get notes from another person and adequately understand what was discussed.* If it is necessary to be absent, it is your responsibility to make up the work missed that day. Please note item #4 above in relation to rescheduling exams and quizzes. If your scores are on a borderline between grades, your attendance history will determine on which side of the border you will be graded. Also, according to the Registrar's Office, regular attendance is closely tied to your eligibility for financial aid.
8. No extra credit work will be authorized.
9. No work will be accepted beyond **Thursday, April 29**. Late work will be accepted, but it will receive a deduction in score.
10. I strongly discourage certain activities which are counterproductive to class goals. These include, but are not limited to, irregular attendance (see #7 above), coming late and leaving early, social conversations during class, eating during class, and similar unproductive and disruptive activities. Please take care of these things elsewhere.
11. Course Fees: A fee of \$20 is required for this course. The purpose of the fee is to cover field trip costs. Also, the College of Science has a centralized fee of \$2/credit hour to be used for the continuous improvement of the quality of our science courses.
12. Students will evaluate their face-to-face courses online at the end of the semester. We take these evaluations seriously and strongly encourage all of you to take part.
13. I will be available during office hours and by appointment at other times. Office hours are listed above. Please feel free to visit me at any time. Your success is my first priority.
14. Disclaimer: Information contained in this syllabus, other than grading, late assignments, makeup work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.

Grading Criteria for Written Papers

Pay attention to grammar and spelling. It's all about communication; poorly constructed messages are confusing. If your words are important enough to write, they are important enough to write well. Give my brain an idea to chew on, not a cryptogram.

Use the following guidelines in preparing your written papers:

An "A" paper is excellent in nearly all respects. It

- is well organized, with a clear thesis, and is well developed with content that is specific, interesting, appropriate, and credible.
- is reader-based, not writer-based. It considers a specific audience.
- has logical transitions that contribute to a fluent writing style.
- has few if any mechanical, grammatical, spelling, or diction errors.
- uses mature, unpretentious language.

A "B" paper shares most characteristics of an "A" paper, but may

- have some minor lapses in organization and development.
- contain some sentence structures that are awkward or ineffective.
- have minor mechanical, grammatical, or diction problems.
- be less distinguished in its use of language.

A "C" paper is generally competent. It is the average performance. However, compared to a "B" paper, it may have a weaker thesis and less effective development. In addition, it

- may contain some lapses in organization.
- may have poor or awkward transitions.
- may have less varied sentence structures that tend toward monotony.
- may have more mechanical, grammatical, and diction problems.

Final Paper and Oral Presentation

Each of you will prepare a term paper on an environmental topic of *local or statewide concern*. Paper guidelines and topic suggestions are listed below. You may choose a topic that is listed, but if you wish you may choose another topic of geographic merit. Above all, it should be of interest to you. Ask me if you are not sure whether a particular topic would be appropriate. You will present your research findings to the class on one of the dates listed in this syllabus. The paper should include a stated objective, map(s) and graphics, and a bibliography. The normal length is ten to fifteen pages. Your oral presentation will earn more credit if you include illustrative material and handouts. You will submit a topic statement on **January 14** (*not optional*). The final written paper is due **April 22**.

The 10-15 page requirement is a guideline. I will not hold strictly to it if the paper is thorough and exhibits a serious effort in scholarly research and writing. However, if the paper is shorter, it must reflect these qualities to justify its length (*or lack thereof*). This does not mean that a long paper is automatically a good paper. Regardless of length, the paper should be well-written and reflect serious effort in scholarly research.

I cannot stress this point enough. Before you submit your paper, have someone read it to check grammar, spelling, punctuation, and clarity. We sometimes get so close to our own work that things escape us, even when we proofread. Even professional authors rely on editors. I will be happy to do that for you if you do not wait too long. Care in grammar, punctuation, spelling, etc. results in a more readable paper and will affect quality and grade. Although this is not an English class, you do need to communicate effectively. If I cannot read it, I cannot grade it. That is why "A" paper standards consider these factors.

You will have approximately ten minutes per oral presentation during which you will summarize your results for the class, including two or three minutes for questions. ***We must hold very closely to time limits to give everyone ample time.*** Be prepared. Ten minutes goes by rapidly. Presentation grades will be affected if you are too long and infringe on someone else's time.

The due date for the written paper is **Thursday, April 22**. Any time during the day is fine, until early Friday morning (*did I say that?*). Please be aware of the late paper guidelines stated elsewhere in this syllabus.

I will look for the following items:

1. Introduction of your topic. This is often overlooked, so pay attention to it. It sets the stage for the entire paper. In addition to introducing the topic an introduction should contain a statement of your major objectives. Remember, it is a formal paper, not a mystery novel. *I want to know right from the beginning that the Butler (or whoever) did it!* Do not keep the reader guessing as to your purposes and objectives.
2. A well-organized main body which hopefully discusses the same topic as the introduction, and with major sections separated with sub-headings.
3. Summary and conclusions. Don't just end abruptly. Sum it up, tie it all together at the end, and tell me what you think.
4. Maps, graphics, charts, tables, pictures that explain your topic. These may be placed in the body of the text or in an appendix. A map or maps is mandatory. The paper should reference the map, and locations discussed in the paper should be shown on the map. Please follow the example you see in most textbooks. Graphics are used to help explain the topic and are not merely added for looks. The text should refer to and explain the graphics. Points will be deducted if you put graphics in the paper without tying them to the text in some way. They are a powerful tool when used properly.
5. A bibliography of at least 8-10 sources (*there may be some leeway depending on your topic*). NOTE: Points will be deducted if all of your references are from the WWW. You must use sources in addition to the web. Also, do not use Wikipedia as a source. I do not expect you to use any specific style guide, but I do expect you to be consistent. Please ask me if you have questions about the use of footnotes, bibliographic entries, or any other aspect of your papers.
6. Ten to fifteen page length (*a guideline, as stated above*), with pages numbered.
7. Recommendation for the oral presentation: Use visual aids, such as PowerPoint, slides, overhead transparencies, posters, pizza, videos, pictures to pass around, handouts, free samples, or whatever you can come up with.
8. For oral presentations, please turn in your bibliography, any handouts you use, and your PowerPoint, if you use it.

I care more about research quality and content than I do about paper length or bibliography size, but don't neglect these either.

Potential Topics for Papers and Presentations

These are suggested essay and term paper topics. You may have another idea that is just as valid. Please indicate your choice of topic to me on January 14.

A. Essay suggestions: Issues of global or national importance.

Acid Rain and Fossil Fuel Use
Air Pollution
Alternative Energy Sources (especially renewable sources)
Asbestos Removal
BLM and rangeland policies
Bottle Laws
CFCs and Ozone Depletion
Coral Reefs
DDT and Other Pesticide Use (Start with *Silent Spring*, by Rachel Carson)
Effects of Dams and Reservoirs on River Ecosystems
Effects of Logging on Riparian Ecosystems
Endangered Species
Energy Conservation
Environmental Effects of War (Persian Gulf War as an Example)
Fish Netting Practices
GAIA Hypothesis
Greenhouse Effect and Global Warming
Hazardous Waste
Hemp Uses (other than as an illegal drug)
Introduction of Non-Native Species into an Ecosystem
Landfills and Solid Waste
Misuse of Marine Resources
Natural Gas and Propane as Motor Vehicle Fuels
Overpopulation
Petroleum Industry
Hunting & Fishing in Wildlife Management and Conservation
Rain Forest Destruction
Refilling and Recycling
Reintroduction of Wolves into Yellowstone
Resource Exploitation on Indian Reservations
Northern Spotted Owl Controversy
U.S. Forest Service Timber Management Practices
Whales
Wilderness Preservation
Radon
Etc.

B. Term Paper or Essay suggestions: Issues of local or statewide concern.

Chaining of rangelands and other rangeland management practices
Clearcutting and other timber harvesting practices on the Dixie and other Utah National Forests, including the spruce bark beetle
Utah Wilderness Issues, such as Grand Staircase-Escalante National Monument
Circle 4 Farms and its potential for air pollution, groundwater pollution, etc.
Water availability for urban development (St. George case study. How fast is St. George growing, and where are they getting the water? You may also include conflicts with Las Vegas)
Las Vegas' attempt to obtain water from Great Basin valleys, including Utah's Snake Valley and the potential impact on lifestyles and ecosystems
Natural hazards, such as flash flooding, unstable soils, landslides, earthquakes, etc.
The Colorado River, The Colorado River Compact, Glen Canyon Dam, and Lake Powell. Should we drain the lake?
Mexican spotted owl, desert tortoise, Utah prairie dog, Gila monster, or other sensitive species in the area
Air or water pollution by local (Iron or Washington County) companies (What about the proposed coal-fired power plant near Mesquite?)
Utah Superfund sites
Air pollution and temperature inversions along the Wasatch Front
The loss of prime agricultural land to encroaching urbanization
Water and soil pollution from mining activities (metals, coal, etc.) and/or agriculture
Uranium mining and use, nuclear waste disposal
Legacy Highway
Etc.

GEOG 3600 – Environmental Geography – Spring 2010

NOTE: Due to my duties as department chair, I may be called upon to be absent from class now and again during the semester. You will be notified of any changes in this calendar.

Week		Monday	Tuesday	Wednesday	Thursday	Friday
1	J A N U A R Y	4	5 Course Introduction	6	7 Resource Economics	8
2		11	12 Resource Economics	13	14 Environmental Policy PAPER TOPIC DUE	15
3		18 MARTIN LUTHER KING JR. RECESS	19 Ecology	20	21 Ecology, QUIZ	22
4		25	26 Population	27	28 Population	29
5	F E B R U A R Y	1	2 EXAM 1	3	4 Agriculture	5
6		8	9 Agriculture	10	11 Forests, QUIZ ESSAY 1 DUE	12
7		15 PRESIDENTS' DAY RECESS	16 Forests	17	18 Biodiversity	19
8		22	23 Biodiversity	24	25 Marine Resources, QUIZ	26
9	M A R C H	1	2 Water	3	4 Water	5
10		8	9 EXAM 2	10	11 Air Quality	12
11		15 SPRING RECESS	16 SPRING RECESS	17 SPRING RECESS	18 SPRING RECESS	19 SPRING RECESS
12		22	23 Air Quality	24	25 Atmospheric Change	26
13		29	30 Non-fuel Mineral Resources	31	1 Energy Resources ESSAY 2 DUE	2 GOOD FRIDAY RECESS
14	A P R I L	5	6 Energy Resources	7	8 Sustainability	9
15		12	13 Student Reports	14	15 Student Reports	16
16		19	20 Student Reports	21	22 Student Reports FINAL EXAM REVIEW	23 <i>Study Day</i>
17		26 FINAL EXAMS	27 FINAL EXAMS	28 FINAL EXAMS	29 FINAL EXAM 11:00AM-12:50 PM	30 COMMENCEMENT