## I. ASCRC General Education Form

<table>
<thead>
<tr>
<th>Group</th>
<th>VI: Historical and Cultural Studies</th>
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<tr>
<td>Dept/Program</td>
<td>Geography</td>
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<tr>
<td>Course #</td>
<td>432</td>
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<tr>
<td>Course Title</td>
<td><em>The Human Role in Environmental Change</em></td>
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<td>Credits</td>
<td>3</td>
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## II. Endorsement/Approvals

Complete the form and obtain signatures before submitting to Faculty Senate Office

<table>
<thead>
<tr>
<th>Please type / print name</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Instructor</td>
<td>Jeffrey Gritzner</td>
<td>19-IX-2008</td>
</tr>
<tr>
<td>Phone / Email</td>
<td>-5626 <a href="mailto:jeffrey.gritzner@umontana.edu">jeffrey.gritzner@umontana.edu</a></td>
<td></td>
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<tr>
<td>Program Chair</td>
<td>Jeffrey Gritzner</td>
<td>19-IX-2008</td>
</tr>
<tr>
<td>Dean</td>
<td>Gerald Fetz</td>
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## III. Description and purpose of the course:

General Education courses must be introductory and foundational. They must emphasize breadth, context, and connectedness; and relate course content to students’ future lives: See Preamble: [http://www.umt.edu/facultysenate/gened/GEPreamble_final.htm](http://www.umt.edu/facultysenate/gened/GEPreamble_final.htm)

While environmental consequences of human activity are noted in relatively early works, such as Sophocles’ *Antigone* and Plato’s *Critias*, the question of human agency in environmental change received little systematic attention until the eighteenth century. This course provides a systematic examination of the ways in which the major physical systems and ecosystems of Earth have been modified by human activity, and approaches to the rehabilitation of these systems. The course will trace our relationship with the natural environment from Sumerian theology through the works of early authors, such as Theophrastus and Lucretius, to the works of more recent authors, such as Alexander von Humboldt, Mary Somerville, George Perkins Marsh, and Carl Sauer.

## IV. Criteria:

Briefly explain how this course meets the criteria for the group. See: [http://www.umt.edu/facultysenate/ASCRCx/Adocuments/GE_Criteria5-1-08.htm](http://www.umt.edu/facultysenate/ASCRCx/Adocuments/GE_Criteria5-1-08.htm)

Courses teach students how to: present ideas and information with a view to understanding the causes, development, and consequences of historical events; evaluate texts or artifacts within their historical and/or cultural contexts; and analyze human behavior, ideas, and institutions within their respective historical and/or cultural contexts.

The course examines cause-and-effect relationships in human-environmental interaction from the use of fire by *Homo erectus* to modern agents of change, such as urbanization, large dams, and resource extraction. Discussion of impact is accompanied consideration measures that would contribute to the restoration of critical functions in environmental systems.
V. Student Learning Goals: Briefly explain how this course will meet the applicable learning goals. See: http://www.umt.edu/facultysenate/ASCRCx/Adocuments/GE_Criteria5-1-08.htm

Upon completion of this perspective, a student will be able to:

1. Synthesize ideas and information with a view to understanding the causes and consequences of historical developments and events.

   The course will document historical cause-and-effect relationships in environmental change, as well as the meaning of these changes in the modern world. Consideration will be given to specific impacts upon the biosphere; the atmosphere; fresh-water resources; the land surface; oceans, seas, and coastal environments. Further consideration will be given to strategies to restore ecosystem function while maintaining sustainable livelihood systems.

2. Evaluate texts or artifacts within their historical and/or cultural contexts;

   A broad range of texts offering differing cultural perspectives will be drawn upon.

3. Analyze human behavior, ideas, and institutions within their respective historical and/or cultural contexts.

   Case studies will examine differing stewardship concepts and their expression on the landscape, relationships between indigenous adaptation and science in charting a sustainable future, and other aspects of culture and environmental change.

VII. Syllabus: Paste syllabus below or attach and send digital copy with form. The syllabus should clearly describe how the above criteria are satisfied. For assistance on syllabus preparation see: http://teaching.berkeley.edu/bgd/syllabus.html

*Please note: As an instructor of a general education course, you will be expected to provide sample assessment items and corresponding responses to the Assessment Advisory Committee.

THE UNIVERSITY OF MONTANA

The Human Rôle in Environmental Change (EVST/GEOG 432)

General Information

Time       Spring Semester, 2001; MWF, 1:10-2:00

Place      Social Sciences Building, Room 362

Instructor Jeffrey A. Gritzner
Course Description

In the history of Western thought, men have persistently asked three questions concerning the habitable earth and their relationships to it. Is the earth, which is obviously a fit environment for man and other organic life, a purposefully made creation? Have its climates, its relief, the configuration of its continents influenced the moral and social nature of individuals, and have they had an influence in molding the character and nature of human culture? In his long tenure of the earth, in what manner has man changed it from its hypothetical pristine condition?

Clarence J. Glacken, *Traces on the Rhodian Shore* (1967)

While environmental consequences of human activity are noted in relatively early works, such as Sophocles' *Antigone* and Plato's *Critias*, this last question received little systematic attention until the eighteenth century. Through time, the theme has been less central in the history of geographical thought than conformity to celestial archetypes; questions regarding the influences of the environment upon humans; or beliefs that set humans above and against nature. The latter beliefs, formulated into a philosophy of science and progress by Francis Bacon, Galileo, René Descartes, and others, continue to compete for our attention. Comte de Buffon was prominent among the first Western scientists to be concerned with the impacts of human activity upon environmental systems.

The course will initially trace our relationship with the natural environment from Sumerian theology through the works of early authors, such as Theophrastus and Lucretius, to the works of more recent authors, such as Jean Fabre, Alexander von Humboldt, Charles Lyell, Mary Somerville, George Perkins Marsh, Élisée Réclus, A. Woeikof, and Carl Sauer. The focus will then shift to patterns of environmental change during the Quaternary; specific cause-effect relationships in change; and the current status of environmental systems. The course will then explore specific human impacts upon the biosphere; the atmosphere; fresh-water resources; the


land surface; oceans, seas, and coastal environments. Finally, attention will be turned toward various strategies linking economic activity and environmental rehabilitation.

**Research Report**

A research report of no more than ten double-spaced pages, including notes and references, will be due **Friday, March 16th**. It may be submitted at any time prior to the 16th. The report should be closely related to topics discussed in class, and should draw upon at least five sources other than assigned readings. The research will serve as the basis for an oral presentation, roughly ten minutes in length. The written report should conform to the conventions contained in any recent edition of Kate L. Turabian's *A Manual for Writers of Term Papers, Theses, and Dissertations* (Chicago: The University of Chicago Press). Several publications provide useful information regarding grammar, punctuation, mechanics, spelling, and usage—for example, Blanche Ellsworth and John A. Higgins' *English Simplified*, 7th ed. (New York City: HarperCollins College Publishers, 1994).

**Examinations**

An examination covering Units I-III is scheduled for **Friday, March 9th**. An examination covering Units IV-V and VII is scheduled for **Wednesday, May 16th at 1:10**.

**Course Grade**

The research report and presentation will account for roughly forty per cent of the course grade; the examinations are equally weighted and will account for roughly sixty per cent of the grade. Class attendance and participation will also be taken into consideration.

**Schedule and Readings**

**Unit I: Orientation and Background**

**Suggested and Required Readings**


*Required Readings*

**Week One** (January 28-February 3, 2001)

Overview and Background

**Week Two** (February 4-10)

Human Impacts upon Environmental Systems in Prehistory
Nature and Culture: Changing Perspectives

**Unit II: The Human Impact upon the Biosphere**

**Suggested and Required Readings**


*Goudie, The Human Impact...*, 37-159.


Soliman Huzayyin, "Changes in Climate, Vegetation, and Human Adjustment in the Saharo-Arabian Belt, with Special Reference to Africa," in *Man's Role...*, 304-323.


Omer C. Stewart, "Fire as the First Great Force Employed by Man," in Man's Role..., 115-133.


**Week Three** (February 11-17)

The Impacts of Fire upon Biotic Communities
The Domestication of Plants and Animals
Dispersals and Invasions of Animals
Animal Extinctions
Summary and Discussion

**Week Four** (February 18-24; Monday, Washington-Lincoln Holiday)

Case Study: The West African Sahel

**Week Five** (February 25-March 3)
Unit III: Human Impacts upon the Land Surface

Suggested and Required Readings


**Week Six (March 4-10)**

Human Impacts upon Soils in Antiquity
The Impacts of Modern Agriculture upon Soils
Erosion, Laterization, and Structural Alteration
Salinity and Reclamation of Salt-Affected Soils
Landforms Produced by Human Activity
Inadvertent Consequences of Human Activity
Summary and Discussion

**Friday, March 9th: Examination Covering Units I-III**

**Unit IV: Human Impacts upon Water**

**Suggested and Required Readings**


**Week Seven** (March 11-17)

Modifications of Surface Flow  
River-Basin Development (Case Study: The Juba Basin, Somalia)  
Changes in Ground Water; Water Pollution  
Summary and Discussion

**Week Eight** (March 18-24; **Spring Break**)

**Week Nine** (March 25-31)

Problems of the Oceans, Seas, and Coastal Zones  
The Future: Summary and Conclusions

**Unit V: Human Impacts upon Climate and the Atmosphere**

**Suggested and Required Readings**


Hippocrates *Airs, Waters, Places*.


**Week Ten** (April 1-7)

Climatic Change in Antiquity
The Impacts of Modern Economic Activity
Case Study: "Global Warming"
Summary and Discussion
Weeks Eleven-Fourteen (April 8-May 5)
Oral presentations based upon research reports will be given from **Monday, April 9th** through **Friday, May 4th**. Each report is to be no longer than ten minutes in length.

**Unit VII: The Future**

**Suggested and Required Readings**


Goudie and Viles, *The Earth Transformed*, 239-244.


**Week Fifteen** (May 6-12)
Wednesday, May 16th: Examination Covering Units IV-V, VII