BIOLOGY 463 - GLOBAL ECOLOGY
FALL 2003

10:30 AM MWF
G21 Life Sciences Building

**Instructor:** Dr. Bill Peterjohn
5214 Life Sciences Building
293-5201 x 31510
bpj@wvu.edu

**Office hours:** 1:30-2:30 PM MTW
Other hours by appointment.

**Text:** There is no textbook specifically for this course. However, required readings will be placed on the course web site throughout the semester as Adobe Acrobat (PDF) files. The address for this site is:

[www.as.wvu.edu/biology/bio463](http://www.as.wvu.edu/biology/bio463)

Problems and related readings will be assigned from the book entitled “Consider a Spherical Cow” by John Harte. This book is available in the bookstore. A additional textbook entitled “Cycles of Life: Civilization and the Biosphere” by Vaclav Smil is recommended and is available in the bookstore.

**Exams:** There will be two mid-term examinations and a final. To ensure that you have sufficient time to complete the mid-terms, these exams will be given in the evening from 7-9 PM on the dates indicated on your syllabus. Each mid-term will comprise 25% of your grade for the course. The final examination will comprise 30% of your grade for the course. The dates for each exam are as follows:

- **Mid-term I**  September 17  (7-9 PM)
- **Mid-term II**  October 20  (7-9 PM)
- **Final Exam**  December 10  (11 AM - 1 PM)

The exams will contain questions from the lectures, assigned readings, and problem sets.

**Missing an exam:** If you miss a mid-term examination, you will receive a grade of zero for that exam. If an exam is missed due to an unavoidable absence, students with an acceptable excuse will be allowed to take a make-up exam.

**Writing assignments:** You are expected to find five articles in scientific journals that deal with some aspect of global environmental change and that were published in the last three years. For each article: (1) read the entire article; (2) write a summary that fits in the space provided on the summary template found on the class web site; (3) provide a complete citation for the article; and (4) attach a copy of the article itself when you turn in your summary. For your first article, you must also complete the critical thinking template found on the class web site and turn it in along with your summary. All summaries must be typed in the form provided on the class web site using a font size no smaller than 10 point. Each article must be from a different journal found on
the list of acceptable journals that I provide you. Your summaries are due in class on the dates indicated in your syllabus, and only one summary per date will be accepted, no more and no less. The summaries will comprise **10% of your grade for the course**.

**Problem sets:** During the semester several problem sets will be assigned in class. These assignments are intended to expose you to the quantitative aspects of global ecology and to encourage cooperative learning. You may work in groups or individually on these problems but some exam questions will be based on your understanding of the procedures needed to solve these problems. Your solutions must show all work and be individually written up and turned in. Your solutions are due in class on the dates indicated in your syllabus. These assignments will comprise **10% of your grade for the course**.

**Grades:** Letter grades are not assigned until the end of the course. Grades are based on the total number of points accumulated by the end of the semester and are determined using the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>100-90</td>
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<tr>
<td>B</td>
<td>89-80</td>
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<tr>
<td>C</td>
<td>79-70</td>
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<td>D</td>
<td>69-60</td>
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<tr>
<td>F</td>
<td>59-0</td>
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</tbody>
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**Social justice:** West Virginia is committed to social justice. I concur with that commitment and expect to maintain a positive learning environment based upon open communication, mutual respect, and nondiscrimination. Our University does not discriminate on the basis of race, sex, age, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class. Please advise me and make appropriate arrangement with Disability Services (293-6700). The first week of the semester is the best time to do this. All matters will be confidential.

**Evacuation Plan for Room G21:** In the event of an emergency, leave the classroom in an orderly manner and turn to the left. Proceed down the hallway to the main lobby and exit the building through either of the two main doors located to the right and left. Once you’ve left the building, quickly move as far away as possible while avoiding parking lots. Do not congregate near the building or in parking lots.
**Writing Assignment**

You may summarize recent articles from any of the following scientific journals:

- Agronomy Journal
- Ambio
- American Journal of Botany
- American Midland Naturalist
- American Scientist
- Applied and Environmental Microbiology
- Arctic and Alpine Research
- Atmospheric Chemistry
- Atmospheric Environment
- Biogeochemistry
- Biological Conservation
- Biology and Fertility of Soils
- BioScience
- Biotropica
- Bulletin American Meteorological Society
- Canadian Journal of Botany
- Canadian Journal of Earth Science
- Canadian Journal of Forest Research
- Climatic Change
- Ecological Applications
- Ecological Modelling
- Ecological Monographs
- Ecology
- Environment
- Environmental Conservation
- Environmental Management
- Environmental Science and Technology
- Geochimica et Cosmochimica Acta
- Geophysical Research Letters
- Global Biogeochemical Cycles
- Global Change Biology
- Hydrobiologia
- Journal of Applied Ecology
- Journal of Ecology
- Journal of Environmental Quality
- Journal of Forestry
- Journal of Geophysical Research
- Journal of Hydrology
- Journal of Paleolimnology
- Journal of Wildlife Management
- Limnology and Oceanography
- Nature
- Oecologia
The citation you provide for each article **MUST** follow precisely the style given in the following examples.

**Examples of the style to be used for literature citations.**

**SINGLE AUTHOR**

**JOURNAL**


**MULTIPLE AUTHORS**

**JOURNAL**


Points will be deducted if the proper format is not used! **If you have any questions, come and see me before your assignment is due.**
WRITING ASSIGNMENT CRITERIA

The following items will be considered in grading your summaries of journal articles.

Form
- Legibility
- Clarity
- Spelling
- Grammar
- Article within last 3 years (1999-2003)
- Article from the primary literature (i.e., written by people who do the science)
- Different journal than those previously used
- Proper citation

Content
- Relevance to global ecology.
- Was the summary adequate?
  - Sufficient background information.
  - Clear statement of purpose.
  - Were the important details and conclusions included?
  - Were trivial details excluded?
  - Were reader expectations met?
    - Were all issues raised, addressed?
  - Was quantitative information used wherever possible and was it put in a meaningful context?
  - Was quantitative information used to support the major points?
- Was the content summarized rather than described?