

# Transforming the Global Environment

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Spring Semester, 2008

**Instructor:** Roger Balm

Office hours: Tuesday, 12:00-3:00 in Lucy Stone Hall B238 (Livingston campus), or by appointment.

E-mail: [balm@rci.rutgers.edu](mailto:balm@rci.rutgers.edu)

Teaching Assistant: Nelun Fernando

Office hours: Wednesday, 9:30-11:30 AM in Lucy Stone Hall B244 (Livingston campus), or by appointment.

E-mail: [dnelunf@eden.rutgers.edu](mailto:dnelunf@eden.rutgers.edu)

*When emailing either the professor or the teaching assistant be sure to write "GEOGRAPHY 102" in the subject field otherwise your message may not get answered.*

**Geography Department URL:** <http://geography.rutgers.edu>

**Class location and time:** Beck Auditorium (Livingston Campus). Tuesday, Thursday 6 (5:00-6:20).

**Text:** An inexpensive study guide has been compiled specifically for the course and is used instead of a textbook. A current edition of the guide is essential for success in this course and is available from the Livingston Bookstore.

## Course Overview

This course forms a basic introduction to environmental science in a broadly conceptual form, applying a systems approach to the principal environmental realms and their responses to a range of human impacts. These realms include the biosphere, the atmosphere, the freshwater hydrosphere, the earth's land surface and the marine hydrosphere. Societal and developmental factors will be discussed as driving forces of transformation and historical contexts will be considered in evaluating contemporary problems and challenges.

Selected lectures are presented on-line and as podcasts. These lectures are indicated in the schedule below as **(( ( Podcast / on-line )))** and there is no class meeting on those dates. There will always be at least two class meetings between each **(( ( Podcast / on-line )))** lecture.

## Schedule of Topics

1	Tues, Jan 22	Introduction and orientation	-----
<b><u>Unit 1: Theoretical Framework</u></b>			<b>Study Guide, Unit 1</b>
2	Thur, Jan 24	Environment as Systems	
3	Tues, Jan 29	Transformation and Development	
4	Thur, Jan 31	Transformation detection and measurement	
<b><u>Unit 2: Transformation of Atmosphere and Climate</u></b>			<b>Study Guide, Unit 2</b>
5	Tues, Feb 5	Radiation balance; aerosols	
6	Thur, Feb 7	Urban climates; acidification	
7	Tues, Feb 12	Ozone depletion	<b>(( ( Podcast / On-line )))</b>
8	Thur, Feb 14	<b>Exam 1</b>	
9	Tues, Feb 19	Greenhouse effect; future climates	
10	Thur, Feb 21	Future Climates	
<b><u>Unit 3: Transformation of the Biosphere</u></b>			<b>Study Guide, Unit 3</b>
11	Tues, Feb 26	Human relationship with the biosphere	
12	Thur, Feb 28	Habitat fragmentation; net primary productivity	<b>(( ( Podcast / On-line )))</b>
13	Tues, Mar 4	Role of fire; desertification; salinization; deforestation	
14	Thur, Mar 6	Deforestation; wetlands	

15	Tues, Mar 11	Invasive species; extinctions; transgenic processes
16	Thur, Mar 13	<b>Exam 2</b>

----- Spring Break, March 15-23 -----

**Unit 4: Transformation of the Land Surface**

Study Guide Unit 4

17	Tues, Mar 25	Rural land surface; soil erosion and destruction	
18	Thur, Mar 27	Urban land surface; river channels; slopes	
19	Tues, Apr 1	Urban waste stream; military environments	((( Podcast / On-line )))
20	Thur, Apr 3	Industrial land surface; mining; hazardous waste	
21	Tues, Apr 8	<b>Exam 3</b>	

**Unit 5: Transformation of the Freshwater Hydrosphere**

Study Guide, Unit 5

22	Thur, Apr 10	Hydrologic cycle; water demand; water control	
23	Tues, Apr 15	Rural and urban hydrology	((( Podcast / On-line )))
24	Thur, Apr 17	Surface water and groundwater pollution	
25	Tues, Apr 22	Surface water and groundwater pollution	

**Unit 6: Transformation of Coasts and the Marine Hydrosphere**

Study Guide, Unit 6

26	Thur, Apr 24	Coastal geomorphology; marine transgression
27	Tues, Apr 29	Marine pollution; coral reefs
28	Thur, May 1	Fisheries

**The final exam will be held on Wednesday, May 14 from 8:00-11:00 AM.**

**The location of the final exam will be announced in April.**

**Grading**

format. The final grade for the course is the average of the final exam grade plus the two highest grades earned from exam 1, exam 2 and exam 3. The lowest grade earned from exam 1, exam 2 and exam 3 is dropped. For the numerical calculations used for determining final grades, see *Calculation of Course Grades* page.

**Exam 1** is based on lectures and readings from the beginning of the course through Tuesday, February 12. **Exam 2** is based on lectures and readings from Tuesday, February 19 through Tuesday, March 11. **Exam 3** is based lectures and readings from Tuesday, March 25 through Thursday, April 3. The **final exam** is cumulative and will cover all material from the beginning through the end of the course but with an emphasis on the most recent material. **The final exam is mandatory for all students.** Each lecture includes material additional to that in the study guide and this material is often included in exams. Good grades require good attendance. Scores and grades are posted on *SAS Gradebook* as soon as possible after each exam.

Makeups are granted only for cases of family bereavement, illness, official university business, military service or jury duty. Please do NOT request a makeup unless your absence is covered by one of these situations. Documentation is required in all cases, preferably provided through an academic dean. Makeups are usually given in essay format. There are no extra-credit assignments available for this course.

**Class Behavior**

All cell phones and pagers must be switched off and put away while in class. In consideration of others please do not engage in unnecessary conversation while class is in session. Rutgers University's Policy on Academic Integrity defines all forms of unacceptable behavior (including cheating) and procedures for dealing with violations. You are expected to be familiar with this policy.