Syllabus: Current Issues in Environmental Science (honors) EEB 3205  
Fall 2011, Tuesday-Thursday 12:30-1:45 PM, Room: BRON 124

Target Audience: This interdisciplinary course targets students who wish to increase their understanding of alternative futures. Discussions of environmental issues and the science behind them will lay the groundwork. Although designed as an honors course, other students in good standing can enroll pending instructors’ permission.

Instructor: Chris Simon, Professor, Ecology and Evolutionary Biology

Texts: G. Tyler Miller & Scott Spoolman. Living in the Environment. 17th Edition (Used copies are available; also available as an “e-book”.)

The Control of Nature, by John McPhee. Section 1 of this book will be discussed in Class in Mid Semester; the book was written in 1989 but is still relevant today. You can get used and new copies on-line starting at $4.

Quiz & Current Events: Each Tuesday except the first, there will be a quiz consisting of up to ten questions related to the readings for the previous Thursday and the current Tuesday. Reading the text is required. Each Thursday at the beginning of class current events assignment are due and five volunteers will present their findings in 4 minutes or less. Each student is required to present three of their current events assignments orally.

Attendance: As with all your classes, you will take away knowledge in proportion to the energy you put in. Students are expected to attend every class and read the text book weekly. However, UCONN policy states that students involved in activities supervised by a University faculty member or official (e.g. scholarly or artistic presentations or etc.) should inform me in writing prior to the anticipated absence and take the initiative to make up missed work in a timely fashion.) The same applies to medical and family emergencies that are documented in writing.

Grades: 25% - Current Events & Class participation (including class discussions, Conrol of Nature group project and the final class futures discussion.) 25% - Quizzes; 25% - Final Presentation; 25% - Final Exam.

Office Hrs: Any time (including evenings or weekends if necessary). Contact me after class or by e-mail for an appointment: chris.simon@uconn.edu. E-mail is better than phone. Office: Bio-pharmacy 305D; Lab Bio-pharmacy 323 & 325, Office phone: 486-4640; lab phone- 486-3947

Seminars: Several scientific lectures (seminars) are listed on the syllabus. Some of these are part of UCONN’s multidisciplinary long-running TEALE Lecture Series, “Nature and the Environment.” Because these generally take place at 4:00 PM on Thursdays and could conflict with your class schedule, they are not mandatory. They are, however, highly recommended. Most represent talks by well-known international experts and relate to course material. These talks can be written up in place of a current events assignment that week.
**Tu. 30 Aug** - Introduction to Current Issues in Environmental Science- Chp 1.
**Th.  1 Sep** - Science, Systems, Matter and Energy- Chp 2

**Tu. 6 Sep** - Ecosystem components, energy flow, matter cycling- Chp 3
**Th. 8 Sep** - Evolution, niches and adaptation Chp 4 (4-1 through 4-5).

***Choice of topic for term project is due Sept. 15th***

**Tu. 13 Sep** - [Finish Evolution] Start  Climate and climate change, biomes- Chp 7 (7-1); Chp 19 (19-1, 19-2)
**Th. 15 Sep** - Climate and climate change, biomes- Chp 19 (19-3); Chp 7 (7-2,7-3)

**Tu. 20 Sep** - Ecology: species interactions, succession, sustainability, population dynamics, carrying capacity, conservation biology- Chp 4 (4-6); Chp 5 (5-1 through 5-3).

**Th. 22 Sep** - Human population: growth, demography, and carrying capacity- Chp 6

**Tu. 27 Sep** - Food, Soil & Pest Management- Chp 12

***Reminder: read Section 1 of the John McPhee book will be discussed in class on October 11th***

**Th. 29 Sep** - Genetically Modified Foods-; Guest Speaker- Dr. Larry Silbart, Center for Environmental Health, UCONN will discuss the environmental impact of GMO’s (Genetically Modified Organisms on foods) Chp 12.

**Tu. 4 Oct** – Pesticides, Pest Control, Food sustainability- Chp 12.

**Th. 6 Oct**- Sustaining Biodiversity . Chp. 9.

NOTE: Special Current events: Control of Nature

6 Oct. 11 EEB Seminar 4:00 PM BPB 130. Dr. Chris Elphick. EEB Assoc. Prof. and Director BS/MS Biodiversity & Conservation Biology Program. “Conservation in an era of climate change: Can we save saltmarsh birds as the ocean rises?”

**Tu. 11 Oct**- No Quiz.  Mid Semester Discussion- The Control of Nature- McPhee- Read also Chp 8.

**Th. 13 Oct** –  Sustaining Biodiversity: Guest lecture: Dr. David Wagner. EEB Professor. The smaller majority: Problems in Invertebrate Conservation. Chps. 9, 10

***OUTLINE AND REFERENCES FOR TERM PROJECT DUE Friday October 21st***

**Tu. 18 Oct**- Sustaining Biodiversity: Case Study- Hawaii, our most endangered state- Chps 9, 10, 11

**Th. 20 Oct**- Sustaining Terrestrial Biodiversity- Invasive Species & Ecosystem Conservation [Please choose a current events related to invasive species.] 9,10,11

20th Oct 11.  EEB Seminar 4:00 PM, BPB 130. Dr. Chris Eckert (Queen's University) Ecology and evolution of geographic range limits.
20th October. (evening) TEALE LECTURE. Nature and the Environment Series. Film Premiere – “Green Fire”—a new film about the life and work of the famous conversationalist, Aldo Leopold. 7:00PM in Konover Auditorium, Dodd Center

Tu. 25 Oct- Non-renewable mineral resources- Ch 14; Start Water Resources.

Th. 27 Oct- Water Resources, Water Pollution- Chps. 13, 20 Air resources & Air Pollution- Chp 18, & 19 (19-4).

Tu. 1 Nov- Guest Lecture. Dr. Gene Likens. Distinguished Senior Scientist, Ecologist Founding Director and President Emeritus of the Institute of Ecosystem Studies & Professor, EEB UCONN. “The acid rain wars and the Hubbard Brook Ecosystem Study”

Th. 3 Nov- Solid and Hazardous Wastes- Chp. 21; Risk Analysis- Chp 17

3 Nov. EEB Seminar 4:00 PM, BPB 130. Norm Ellstrand. Professor of Genetics. U.California, Riverside. "Crops gone wild: the evolution of weeds and invasives from domesticated ancestors".

Tu. 8 Nov Non-Renewable energy resources- Chp 15

Th. 10 Nov- Energy Efficiency and Renewable Energy- Chp 16

Nov 10th EEB Seminar 4:00 PM, BPB 130. Tracy Rittenhouse (University of Connecticut NRE) Up-scaling wildlife response to global change: Mechanistic research that informs management.

Tu. 15 Nov- Sustainable Cities- Chp 22


Tu. 22 Nov- No class- Thanksgiving break
Th. 24 Nov- No class- Thanksgiving break

Tu. 29 Nov- Start of Student Presentations.
Th. 1 Dec- Student Presentations.
Tu. 6 Dec- Student Presentations
Th. 8 Dec- Student Presentations, Last Day of Class


Thursday evening December 8th- Class Dinner Party at my house accompanied by a discussion of Alternative Futures and a demonstration of energy saving technology and house construction.
Final Exam 16 Dec 11, 10:30-12:00.