

**Farrand 2820: The Future of Spaceship Earth:
The Challenge of Creating a Sustainable Future
Harding classroom, MWF, 011:00-11:50 p.m. (710)**

Fall 2013

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Office Hours: T: 1:00-3:00; Th 10:00-12:00, 1:00-3:00, and by appointment

Sewall Academic Mission: The primary goal of the Sewall Academic Program is to promote critical thinking within the framework of a liberal arts curriculum that emphasizes the interaction between history and culture. To meet this goal, the program offers small, seminar-style classes that foster analytical thought through reading, discussion, and written expression and that require active and consistent student participation.

Course Description: These are some of the central questions of this course: Why isn't our global society sustainable? What is the sustainability crisis? What is a sustainable society? What are the major roadblocks preventing the creation of a sustainable society? How do we protect the global environment, maintain a healthy global economy, and create a sustainable society? How do we design a sustainable economy and society?

Required Reading:

Paul Gilding, The Great Disruption

David Orr, Hope is an Imperative

James Speth, The Bridge at the Edge of the World

Course Objective: Can we create a Sustainable Future? Are our current national societies and global society and economy sustainable? What do we mean by Sustainability and a Sustainable Future? Can we design a society and economy that is sustainable, democratic, and prosperous? This course uses a broad interdisciplinary approach in order to help students understand the central issues of sustainability and sustainable futures. We will study sustainability through the lens of culture and societal change, political conflict, ecological economics, global environmental issues, globalization and development, ecological design, and a 21st-century liberal arts education. The larger goal of this course is to teach you how to critically analyze, evaluate,

and judge competing perspectives on the challenge of creating a sustainable future in the 21st century. If you disagree with an argument or perspective, or find it biased or limited, then say so. If you find the reading difficult, confused, or pointless, then say so. But, in each case, you must be prepared to support your argument and larger conclusions.

Class Format: Interactive lectures and class discussions. We will use the assigned readings to critically analyze and evaluate the debate between politicians, environmentalists, scientists, economists, and developers about creating a sustainable future. **Make sure you read the assigned readings before each class.**

Grading: Grades will be based on quizzes and assignments(15%) , class participation (15%), two take-home midterms (20% each), and a take-home final (30%). I reserve the right to give unannounced quizzes and assignments in class. Content will count most heavily in all written work, but grammar, spelling, and style will also affect your grade.

Course grades will be defined in these terms:

A—Excellent -- (Thoughtful, coherent, insightful, contributes)

B—Good -- (Knows material well, lacks depth, not outstanding)

C—Fair -- (Adequate, average, passing, little participation)

D—Poor -- (Little understanding, little effort, incoherent)

F—Fail -- (No evidence of understanding, no work, no learning)

Exams: Exams will be made up of essay questions covering short lectures, class discussion, and reading assignments. Your essays will be graded on how well you use arguments and examples from class discussion and the reading to support your thesis. Instead of memorizing the material, concentrate on learning how to use arguments and examples to address major themes in the debate about the global environment and the American future. If you keep up with the reading and take good class notes, you should have no trouble with the exams.

Class Participation and Attendance : Because this is not a lecture course, **active class participation is very important.** Class participation and class attendance will be a large part of your grade (15%). You must participate actively

in class discussion in order to get a high participation grade.

Class attendance is required. You may miss only 7 class periods in a MWF class. Upon your 8th absence, you will automatically fail the course. If there are extenuating circumstances (for example, hospitalization or extended illness), they will be taken into account on a case-by-case basis in implementing the automatic failure provision, providing that you can present evidence/documentation. So please try to attend class regularly.

Disruptive Classroom Behavior : This is a college classroom. I will deduct points from your final class grade for behavior that is disruptive to the classroom learning environment. Disruptive behavior includes sleeping, using your cell phone, surfing the web on your computer, playing computer games, checking your e-mail, checking your Facebook, sending and receiving text messages, twittering, listening to your MP3 player, watching DVDs or Netflix movies, reading newspapers, working on another class in this class, planning your day with your daytimer or Blackberry, etc. If after the student is warned, the disruptive behavior persists, I will ask them to leave the classroom for that day.

Classroom Behavior: Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code

Incompletes : I will be very reluctant to give a grade of Incomplete (I). I assign incompletes only to students who have successfully completed most of the course work and who have been prevented by significant and unanticipated

Discrimination and Sexual Harassment: The University of Colorado at Boulder policy on Discrimination and Harassment

(<http://www.colorado.edu/policies/discrimination.html>, the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>

University Honor Code: All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at

<http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>

As faculty, students, and members of the University community, we value honor, integrity, and morality. Honor is about academic integrity, moral and ethical conduct, and pride of membership in a community that values academic achievement and individual responsibility. Cultivating honor lays the foundation for lifelong integrity, developing in each of us the courage and insight to make difficult choices and accept responsibility for actions and their consequences, even at personal cost.

Students with Disabilities: I encourage students with disabilities, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, attention deficit/hyperactive disorder, and psychiatric disabilities, to discuss with me after class or during my office hours appropriate accommodations. If you have any additional questions about how the University can accommodate your disability, please see me or the Coordinator of Disability Services in the Disability Services Office , 322 Willard Hall, (303-492-8671). If you qualify for accommodations because of a disability please

submit a letter to me from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities (303-492-8671, Willard 322 (www.colorado.edu/disabilityservices)).

Religious Obligations and Class Attendance: Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class if you have conflicts with scheduled exams, assignments, or other required attendance, because of religious obligations, please notify me two weeks in advance of the conflict to request special accommodation., See the CU Policy at this website: http://www.colorado.edu/policies/fac_relig.html

Cheating and Plagiarism: My policy on cheating and plagiarism is to assign a zero to the work in question. Plagiarism is copying another person's work and turning it in as your own. Plagiarism can involve buying a "class paper" online, copying another student's work, or copying whole paragraphs and material from other sources, such as encyclopedias or textbooks. See the website for the Pledge not to Plagiarize: <http://www.colorado.edu/academics/honorcode/Code.html>.

Daily Reading Assignments: Most of the assigned readings are on the course website in the daily class website links. You will need a password to access the readings: "cclewis". These readings are "pdf documents" that you can read online or print out and read at your convenience.

1. Sustainability and the Human Future

Aug. 26 **What is Sustainability?**
Orr, pp. 13-20, "Slow Knowledge" (web)

(Introduce the concept of Sustainability, the debate over Sustainable Futures, and the Earth Summits)

Aug. 28 **Our Earth and the Sustainability Crisis**
Orr, pp. 66-72, 126-132; "The Earth Charter" (web);
Krieger, "The Earth Charter Explained" (web)

Aug. 30 Is a Sustainable Society a Realistic Goal?
Orr, “None So Blind: The Problem of Ecological Denial” (web);
Orr, “Economics” (web); Brown, “Global Ponzi Scheme” (web);
Milbraith, “Comparing Competing Paradigms” (web)

Sept. 2 No Class –Labor Day Holiday

Sept. 4 The Challenge of Sustainability
Orr, 46-54, 73-92; Sachs, “Sustainable Humanity” (web);
McNeil, “Modern Global Environmental History” (web)

Sept. 6 Is Humankind Destroying the Global Environment?
Brown, “On the Edge” (web); Brown, “The Economy and
the Earth” (web)

2. The Science of our Unsustainable Future

Sept. 9 What is a Tipping Point? Re-thinking how we Think
Gladwell, “Tipping Points” (web); Keith, “Is Humanity
Pushing the Earth past a Tipping Point” (web);
Keith, “7 Tipping Points that could Transform Earth” (web);
Keith, “Scientists Seek Warning Signs for Catastrophic
Tipping Points” (web)

Sept. 11 Learning to Think about Complex Adaptive Systems
Capra, “The New Facts of Life” (web); Heinberg, “You can’t
do just one thing” (web); Senge, “How We Got into this Mess”
(web); MacGill, “Complex Adaptive Systems” (web); “Systems
Thinking Basics” (web)

Sept. 13 Global Ecology and the Sick Earth
UCS, “World Scientists Warning to Humanity” (Web) ;
Paul Ehrlich, “One Planet, One Experiment” (Web);
“State of the Planet 2012” (web); WEF, “2012 Global Risks
Map –detailed” (web)

- Sept. 16 Entering the Anthropocene Epoch**
Jan Zalasiewicz, “The Anthropocene” (web);
Steffens, “The Anthropocene: Are Humans Now
Overwhelming the Great Forces of Nature” (web);
Walsh, “Nature is Over” (web); Crutzen, “Can
We Survive the Anthropocene Period?” (web)
- Sept. 18 How Much of the Earth do Humans Use?**
“Living Planet Report 2010” (web); “Mankind
Using Earth’s Resources at Alarming Rates” (web);
“How Much Is Left? The Limits of Earth’s Resources,
Made Interactive” (web)
- Sept. 20 Approaching a Global Tipping Point for the Earth**
Barnofsky, “Approaching a State Shift in the
Earth’s Biosphere” (web); Pappas, “Earth’s Tipping Point
Study in Nature” (web); “Earth in the Balance:
7 Crucial Tipping Points” (web); Spotts, “Humans
Near Tipping Point” (web); Diagram of
Tipping Elements in the Earth’s System” (web)
- Sept. 23 What are the Planetary Boundaries for the Earth?**
Rockstrom et al., “Planetary Boundaries: Exploring
the Safe Operating Space for Humanity” (web);
Steffen, “How defining Planetary Boundaries can
Transform our Approach to Growth” (web); “Planetary
Boundaries Diagram” (web); “Planetary Boundaries –
Wikipedia”(web)
- Sept. 25 The UN Millennium Ecosystem Assessment Report**
United Nation, “Ecosystems and Human Well-being”;
United Nation, “Living Beyond Our Means” (web)
- Sept. 27 How do We Put a Price on Ecosystem Services?**
Costanza, “The Value of the World’s Ecosystem Services” (web);
Costanza, Valuing ecological systems and services (2011) (web);
“Preface to UN Millennium Ecosystem Assessment Report” (web)

Sept. 30 **The 2012 Living Planet Report and the Human Future**
WWF, “Living Planet Report 2012 Summary” (web);
UNEP, “2012 Global Environmental Outlook Summary” (web)

3. The Sustainability Crisis in the 21st Century

Oct. 2 **Imagining an Unsustainable Future**
Orr, pp. 57-65; Speth, pp. 1-13; Daly, “Economics
in a Full World” (web)

Handout Take-home midterm # 1

Oct. 4 **Our Unsustainable Future**
Speth, pp. 17-45; Orr, pp. 99-109;

Oct. 7 **The Failures of Global Capitalism**
Speth, pp. 46-61; Speth, “Attacking the Root Causes” (web)

Oct. 9 **Transforming Global Capitalism**
Speth, pp. 100-125;
Hawken, “Preface to the Ecology of Commerce” (web)

Oct. 11 **Creating a Restorative Economy**
Speth, pp. 165-182; Hawken, “Declaration of Sustainability”
(web); Hawken, “Dreams of a Livable Future” (web)

Oct. 14 **Re-thinking our Culture of Consumption**
Speth, pp. 147-149, 160-164; “Humanity would need Five Earths if
Everyone Lived like Americans” (web); Schor, “Why do We
Consume so Much” (web); “How much is Enough” (web)

Oct. 16 **Challenging our Cultural Assumptions**
Speth, 233-237; Ehrenfeld, “False Assumptions” (web);
Ehrenfeld, “A Call for Fusion and Re-generation” (web)

4. Working together through the Great Disruption

Oct. 18 Is the World Full? Growth in a Finite World

**Friedman, “The Earth is Full” (web);
Gilding, pp. 1-29**

Oct. 21 Addicted to Growth in a Full World

Gilding, pp. 30-75

Take-home midterm # 1 is due

Oct. 23 Foreshadowing the Great Disruption

Gilding, pp. 76-114

Oct. 25 When the Dam of Denial Breaks

**Gilding, pp. 115—142; Berry, “Faustian Economics’ (web);
Sachs, Self Interest, Without Morals, Leads to
Capitalism's Self-Destruction” (web)**

Oct. 28 Out with the Old and In with the New

Gilding, pp. 143-183

Handout Take-home midterm # 2

Oct. 30 The End of Affluenza and Shopping

Gilding, pp. 184-213; Gray, “Utopia Fails” (web);

Nov. 1 The Dilemma of Poverty and Inequality in a Full World

**Gilding, pp. 214-235; Speth, “Ten Drivers of Environmental
Destruction” (web)**

5. Taking Charge and Working Together to Change the Future

Nov. 4 Who is Going to Take Charge of the Future?

**Gilding, pp. 236-263; Orr, pp. 324-332; Speth, “Towards a New
Economy and New Politics” (web)**

- Nov. 6 Plan B and Establishing Priorities for a Sustainable Future**
Brown, "Plan B 4.0 Proposal" (web); Brown, "Plan B PDF Summary with Charts" (web)
- Nov. 8 The United Nations and Global Sustainability**
UN, "Resilient People, Resilient Planet Report – 2012" (web);
UN – "Global Sustainability Panel's Vision" (web)
- Nov. 11 UN Report on Sustainability and Equity**
UNDP, "Sustainability and Equity – Report Summary" (web);
WBCSD, "A Vision for Sustainable Consumption" (web)
- Nov. 13 What is the role of Women in Sustainability?**
UN, "Hit or Miss? Women's Rights and the Millennium Development Goals" (web); Verveer, "Gender Equity and Sustainable Development" (web)
- Nov. 15 The Challenge of Creating a Green Economy**
Jenkins, "Charting a Path towards the Green Economy" (web);
GTI, "Premises for a New Economy" (web);
GTI, "Where Do We Want to Go" (web)
- 6. Designing a Sustainable Future**
- Nov. 18 Sustainability and Ecological Economics**
Daly, "Five Policy Recommendations for a Sustainable Economy" (web); Brown, "The Shape of an Eco-Economy" (web);
- Take-home midterm # 2 is due**
- Nov. 20 Creating a Restorative Economy**
Hawken, "A Teasing Irony" (web);
Lovins, Lovins, and Hawken, "A Road Map to Natural Capitalism" (web); Senge, "A Future Awaiting Our Choices" (web)
- Handout Take-home Final**

- Nov. 22 Building Natural Capitalism**
Hawken et al., “The Next Industrial Revolution” (web);
Hawken et al., “Once Upon a Planet” (web)
- Nov. 25-29 -- No Classess -- Thanksgiving Holiday**
- Dec. 2 Sustainability and Ecological Design**
Orr, 165-171; Orr, “Human Ecology as a Problem
of Design” (web); Van Der Ryn, “Building a Sustainable Future”
(web); Van Der Ryn, “Buildings for the 21st century” (web)
- Dec. 4 Global Capitalism and the Design Revolution**
Orr, pp. 180-185; MCBC, “Design for a Cradle-to-Cradle
Future” (web); Wann, “Biologic” (web)
- Dec. 6 Practicing Ecological Design**
Van Der Ryn and Cowan, “An Introduction to Ecological
Design” (web); MDBC, “Applying the Principles of Green
Engineering” (web); MDBC, “Design for the Triple Top Line”
(web)
- Dec. 9 What are Sustainable Cities?**
Rees, “The built environment and the ecosphere” (web)
Rees, “Getting Serious about Urban Sustainability” (web)
- Dec. 11 Sustainability in a Greenhouse World**
Orr, pp. 324-332; Speth, “Fundamental Transition”(web);
Ehrenfeld, “The Utopian Fallacy” (web)
- Dec. 13 Building a Sustainable Future in the 21st Century**
Orr, pp. 55, 316-323 ; Hawken, “The Inestimable Gift of
the Future” (web); Hawken, "2009 PSU Graduation Address" (web)

**Take-Home Final Exam: Due Monday, Dec. 16th , between
10:00 and 4:00 p.m. in my office (Sewall 42D)**

