SUSTAINABLE LIVING

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Course Description
This course explores our current unsustainable practices in the areas of housing, energy, food, water, and community, and presents residential-scale strategies for living more sustainably in each of these areas.

Required texts
Daniel Chiras, The New Ecological Home
Michael Pollan, The Omnivore’s Dilemma
Toby Hemenway, Gaia’s Garden

All other readings will be posted on Blackboard, or circulated in class, or, if available on the internet, listed with a web address.

Cooperative Learning
This course makes regular use of “cooperative learning” groups. This means working together with, usually, three other students on some assignment or project, usually in-class, but occasionally out of class. These groups will be formed in advance, and you will work with the same group throughout the quarter. Studies show that students learn more and more deeply if they solve a problem with a few others, in a way that asks each to explain their reasoning to the others. Some sessions already indicate that a cooperative learning exercise will be conducted. Others will be announced as we proceed. Cooperative learning necessitates that everyone come prepared (having done the reading and thought about it), and participate in the group discussions. Absences are deadly to a cooperative learning exercise, so should not be taken lightly. On these days, if for some reason you must be absent, you MUST email the instructor and your designated workmates IN ADVANCE or get a zero for the day. Cooperative leaning assignments usually end with a joint piece of work of some kind, which will be evaluated by the instructor, and each member of the group will receive the same grade. In other words, you will be collectively responsible for the result. There will be an opportunity at various points in the quarter to anonymously evaluate the contributions of the other members of your group to your group work (i.e., you will give each other a grade), and this will be factored into your final grade.
SYLLABUS (Subject to Minor Revision)

I. Housing

Week 1: **Course Introduction; Small can be beautiful**
  * Course Introduction.
  * In-class viewing of “Too Hot Not to Handle” or “An Inconvenient Truth”
  * Margot Adler, “Behind the Ever-Expanding American Dream House,”
  * Sarah Susanka, *The Not So Big House* (selections, on Blackboard)
  * Bring to class a floor plan of parents’ house; identify most-used and least-used living space. Cooperative groups will shrink it by 30%!
  * In-class viewing of Susanka interview (Google: “notsobighouse showhouses” for picture show: [http://www.notsobigshowhouse.com/](http://www.notsobigshowhouse.com/)) and 4 Part walking tour
  * In-class viewing of “Jay’s Tiny House tour”

Week 2: **Green building materials**
  * Chiras, *The New Ecological Home* (pp. 16-25, 29-30, 155-178, on Green and Natural Building)
  * Chiras, *The New Ecological Home*, 193-218 (on passive energy)
  * Passive House, NYTimes article (on Blackboard)
  * Come to class with one written page describing two green building materials you have researched not mentioned by Chiras, or two homes constructed largely from recycled materials (internet research okay for this exercise).
  * Tour Lance Wright’s home (Colorado representative of the Passive House standard) at 12:30.

First paper due, emailed by Sunday 6 p.m: the comfortable green home. 3.5 pages.

II. Power

Week 3: **Passive solar heating and passive cooling; active solar and wind energy**
  * “The Impossibility of Growth”
  * “Efficiency Paradox”
  * “Efficiency paradox response”
  * Krugman, “Errors and Emissions”
  * Alexis Ziegler reading? (TBA)
  * research solar oven designs on the internet
  * Chiras, 219-230 (on active energy: Wind and Solar Power)
* research and bring to class information on two sources of energy alternative to fossil fuel, wind, and solar, including their pros and cons
* Bring solar oven materials
* Class visit from Ben Waldman, green builder
* Construct solar ovens during class (cooperative learning).

Second iteration of paper due Sunday, 6 pm: the comfortable, powered home. 5pp.

Week 4: (Two hour class)
* Peer review of second paper (cooperative learning)

III. Water

Week 5: Water harvesting and conservation
* San Diego Union Tribune, “Colorado River may face fight of its life” (on Blackboard as “Colo River threatened”)
* In-class video, *Cadillac Desert: The American West and Its Disappearing Water*, Program 2, An American Nile
* Explanation of the mechanics of drip irrigation
* Community Garden: drip irrigation and/or planting

IV. Food

Week 6: Producing Industrial Food
* Michael Pollan, *The Omnivore’s Dilemma*, 1-7, 17-56, 64-84 (cornfield and feedlot)
* in-class viewing of “Food, Inc.”
* Corn poetry in-class (cooperative learning)

Week 7: no class meeting. Read and post on Processing Industrial Food
* Michael Pollan, *The Omnivore’s Dilemma*, 85-108 (processed foods)
* Research a processed food and post. Comment on other posts.

Week 8: GMOs; Post-Industrial Agriculture
* GMO reading (on Blackboard)
* Lasater in-class presentation GMO and labeling?
* Michael Pollan, *The Omnivore’s Dilemma*, top of 125 – top of 136; 139-140; 185-225 (grass; complex systems of animals)
* Pollan, “Open Letter to the President”
Week 9: Local Food

* Hemenway, *Gaia’s Garden*, ch. 4, “Bringing the Soil to Life” (24 pp)
* GrowHaus tour and workshop (drivers needed)
* Begin design of plant guilds in-class

Final iteration of paper due Sunday at 6 p.m.: The comfortable, powered, watered, well-fed, sustainable homestead.

V. Community

Week 10: Ecovillages, co-housing, final presentations on cooperative homesteads

* Chiras and Wann, *Superbia!,* chs. 1-3.
* Go to the “Dancing Rabbit Ecovillage” website (do a web search). (1) Read “About DR.” After reading it, click on the “vision” link embedded in the text. From the vision page, read the following links: Ecological covenant, sustainability guidelines, Membership Agreement. (2) Go back to the homepage and, under “Follow DR,” select “DRTV – YouTube Channel”; select “Videos.” Click on “Organic Farming” at the top of the page and view “Sustainable Agriculture and Community at Sandhill Farm.” (Optional: view the 9:25 minute video “Life with Thomas” (whose life is atypical even for DR)). (3) Go back to the homepage and, under “About DR” select Eco-Living and “Food.” Read the page and the links “what we eat, where we get it” and “how we prepare it.” Also under “About DR,” read at least three other links that most interest you under the subheadings “Our Land,” “Social Change” or “Eco-Living.” On a single sheet of paper, jot down a few talking points for each of these three that will help you describe them to your peers during our discussion. This sheet will be handed in at the end of class. (4) All of this should not take you much more than an hour. If you are intrigued, please read more!
* visit and read http://www.huffingtonpost.com/2010/08/20/photos-modern-day-green_n_687530.html#s128552
* In-class viewing of “30 Days,” on Dancing Rabbit (50 minutes)
* Group presentations: *the sustainable, powered, watered, well-fed home, in community.* Designs for a sustainable Colorado homestead. 20 minutes per group.
* Peer review (an opportunity to evaluate the contributions of your peers to your small group discussions and group projects)
* Bring laptops for on-line course evaluation
Course Requirements and Grading

Course credit will be based on class participation, completion of cooperative learning assignments, completion of all installments of a single cumulative paper, completion of plant notes, participation in a final group presentation, and quizzes and outlines. I reserve the right to adjust the assignments as we proceed. In calculating your grade, the various components of this course will be weighed in roughly the following proportions: 55% papers, 15% class participation, 10% cooperative learning assignments, 10% final presentation, 10% outlines and quizzes.

Participation: Class time will be devoted primarily to discussion of the readings, sometimes in a small group setting, and sometimes with the full class. It makes no sense to come to class if you haven’t done the readings: you will get very little out of the discussion, and others will get nothing out of you. You do not get credit for showing up; you get credit for speaking up. On the other hand, the classroom is not a competitive arena. If you make one reasonably thoughtful comment in our full-class discussions on a given day, you get full credit for the day. Come with a question or comment in mind. Also, I’ll occasionally ask a “no-brainer” question. If you’ve nothing else to say for the day, or are simply shy, at least take advantage of these. We’ll all thank you for it, as it will help us keep discussion at a steady pace. Above all, be sensitive to the classroom dynamic, for which we are all responsible. Don’t take over the discussion; disagree respectfully; keep your comments on topic; try to refer to your classmates by name when referencing a point they have made (this helps keep things civil—reminding us that there is a person behind every opinion).

Papers: Papers will be divided into a style component (worth one third) and a content component (worth two thirds).

Extension policy: Paper due dates are announced, and paper topics handed out, well in advance of the deadline. If you budget your time and start your paper early, you should have no trouble getting your paper in on time, even if you fall ill. There are no deadline extensions in this course, with exception made only for hospitalization or death in one’s immediate family, to be confirmed through an email from one’s academic advisor. There are no extensions for illness, extracurricular activities, other schoolwork, or anything else. However, I will accept a paper up to one day late, at a penalty of a third of a letter grade, with that penalty beginning one minute after the regular deadline.

Notes, outlines, and quizzes: I will occasionally ask you to submit notes on a reading, usually because I judge the reading to be particularly tricky or to require the connecting of some dots. Notes should be one or two pages long, no longer. Good notes record questions and insights you have and connections you make. There will also be occasional quizzes. If everyone continues to do the reading and discussions remain lively, fewer quizzes will be administered.
FIRST PAPER TOPIC

Because you graduated from DU with academic honors, your wealthy grandparents decided, upon your graduation, to gift you with five acres of gently sloping land West of Denver, in the foothills of the Rockies. It is now several years later, and you have been persuaded to write an article for “5280 Magazine” publicizing your success at developing a super sustainable homestead there using principles and practices that you learned about in your Sustainable Living Advanced Seminar. In your article, you should describe your house design and construction, emphasizing its sustainability features. Throughout your article, you should reference sources to which your readers can turn for more details. The article should amount to 3 pages double-spaced in 12 point type with standard margins. Up to half a page may consist of a drawing (I would advise this), which may be drawn by hand.

Helps:
In writing this paper, you will want to provide some explanation about why building sustainably is important, and you will want to justify the choices you have made in your building design and materials (in other words, don’t just describe your house, but explain why you have done what you have done). Likely, you will focus on design principles drawn from Susanka and will consider building materials mentioned by Dan Chiras or that you have found in your own research. The paper could be written without conducting further research, but outside research is always welcome and can be expected to strengthen the paper.

Do not waste space writing about passive heating and cooling, electricity generation, water harvesting and conservation, or landscaping at this time!

SECOND PAPER TOPIC

Because you graduated from DU with academic honors, your wealthy grandparents decided, upon your graduation, to gift you with five acres of gently sloping land West of Denver, in the foothills of the Rockies. It is now several years later, and you have been persuaded to write an article for “5280 Magazine” publicizing your success at developing a super sustainable homestead there using principles and practices that you learned about in your Sustainable Living Advanced Seminar. In your article, you should describe your house design and construction, and describe the system of heating, cooling, and electricity generation that you use. Throughout your article, you should reference sources to which your readers can turn for more details. The article should amount to 5 pages double-spaced in 12 point type with standard margins. Up to half a page may consist of a drawing (I would advise this), which may be drawn by hand.
Because you graduated from DU with academic honors, your wealthy grandparents decided, upon your graduation, to gift you with five acres of gently sloping land West of Denver, in the foothills of the Rockies. It is now several years later, and you have been persuaded to write an article for “5280 Magazine” publicizing your success at developing a completely off-grid homestead there using principles and practices that you learned about in your advanced seminar. In your article, you should describe your house (including how it is heated and powered), your landscaping (edible and non-edible), your animals (if you eat meat), and the principles underlying your choices. Your landscaping and animals should be, in effect, a system of high intensity food production (and system of food storage) that makes your homestead self-sufficient through all four seasons. Note that the arid climate is a major constraint on food production in Colorado; there is no stream or spring on your property, and the aquifer is too deep to dig a well, so somewhere you should describe the water collection, storage, and conservation strategies that you use, both at the house and on the land, including perhaps your strategies for soil-building, as this too is part of an integrated water storage system. Throughout your article, you should reference sources to which your readers can turn for more details. Space allowing, you might include an account of your daily routine, or major seasonal changes in routine. Your article should be 8-10 pages in length, double-spaced in 12 point type with standard margins.