BIOL 134: PRINCIPLES OF SUSTAINABILITY

Johnson County Community College
Overland Park, KS

Kim Criner, kcriner@jccc.edu

History

- First offered Spring 2012
- Born out of Sustainability Curriculum Committee
- One of a couple sustainability-themed courses hoping to lay a base for a certificate or other integrated educational initiative (ex. Environmental Ethics)

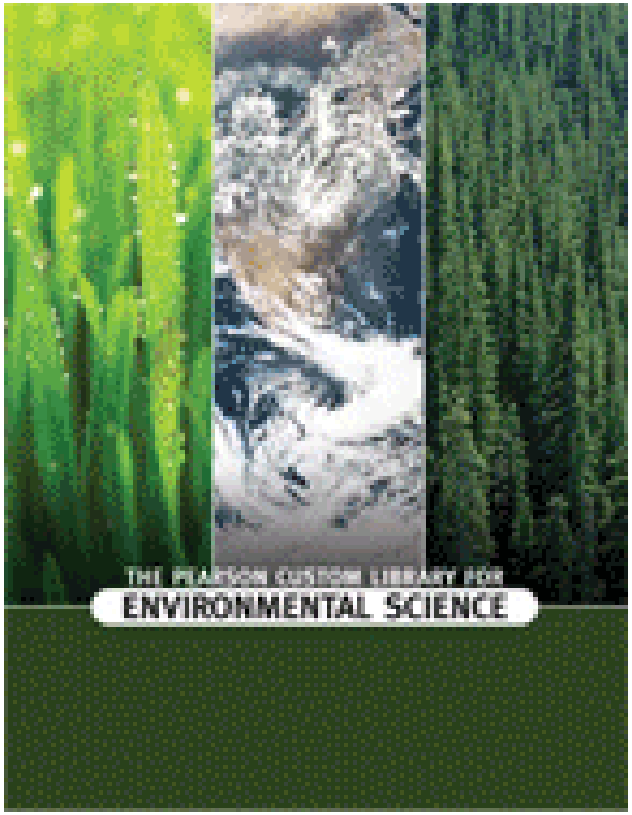
Hurdles

- Educational Affairs
  - At the time, not in favor of a certificate or degree
  - Assessment and streamlined curriculum are state priority
  - Approve class, but house in Biology
  - Receives General Education approval, and thus cannot be cross-listed..
- Scheduling
  - One section offered once a year. Chicken and egg kind of issue.
- Perception
  - Reinforcing for students and other faculty that sustainability is an add-on/special-interest scientific topic

Course Objectives

- Examine sustainability from a multidisciplinary perspective and the vocabulary associated with informed discussions of sustainability issues and solutions.
- Define systems thinking and apply that approach to issues in sustainability.
- Identify, diagram and describe systems in terms of their ecological, social and economic dimensions.
- Discuss key figures, tests, events and laws associated with the environmental movement at the local, state, and national and international levels.
- Identify a local sustainability issue, research and assess the problem, including its inherent political, economic, ecological and social components.
- Participate in a local on-going sustainability initiative or develop new initiatives.
- Collaborate with other students and members of the community in order to propose solutions for a more sustainable world.

Text



Supplemented with readings from:

- *Resilience Thinking* by Brian Walker
- *The Omnivore's Dilemma* by Michael Pollan
- *The World Without Us* by Alan Weisman
- *Big Coal* by Jeff Goodell
- *Eaarth* by Bill McKibben
- *Deep Economy* by Bill McKibben
- *Living Downstream* by Sandra Steingraber
- Various by David Orr

Requirements

You will be graded on the following:

- Two exams (one mid-term and one cumulative final) – 40% (20% each)
- Homework and reflection questions due prior to each class, as assigned – 15%
- Research Paper 1 – 20%
- Research Paper 2
  OR Service Learning* project, **both** options including in-class presentation – 25%

100%

Challenges

- How to maintain or encourage a positive and empowering world view while necessarily dealing with realities?
- Students asking for neat factor
- How to snapshot sustainability concepts, issues, and interconnected systems in a meaningful way in a semester?!
- Is systems thinking too much to ask of a 100 level course? Or should it be all we do?

Future Implementation Ideas

- Resilience, adaptive systems and systems thinking through one topical area. For example: Sustainability Special Topics: Food Systems (Or Energy, etc.)

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