

ENVR 800B
Seminar on Measuring and Modeling Sustainability
Fall 2000

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Required Materials

Texts (available in bookstore or through various sources):

- (1) The Ecology of Commerce, Paul Hawken, 1993, HarperCollins, New York.
- (2) Sustainable Measures: Evaluation and Reporting of Environmental and Social Performance, Martin Bennett and Peter James, editors, 1999, Greenleaf Publishing, Sheffield, UK.

Packet of readings: Selected articles will be placed on reserve in the Springs Library on the second floor of the business school.

Seminar Description

This seminar will have a dual focus upon measurement and modeling, with an emphasis on the business perspective. Recent conferences and writings on sustainable development point to a need for a better and more standardized means of defining and measuring the term sustainability and, thus, the first segment of the course will primarily deal with this issue. The second segment will look at current efforts in business, engineering, and the sciences to model sustainable processes, organizations, and development. Discussions of readings and cases, guest lectures, and student presentations will form the basis of class sessions.

Course Grade

The following weighting scheme will be used to assess course grades:

Midterm Paper	30%
Term Project/Paper	35%
Class Participation	20%
Class Note Assignment	15%

Participation and attendance are mandatory since the course will revolve around class discussions, exercises, and lectures from faculty and various guests. In general, each week's two and one-half hour session will be partitioned into two parts; one for a discussion of assigned readings and the other for a "lecture/talk."

There will be three written assignments/papers. The "midterm" paper will involve a literature search and synopsis of the first part of the course. The second paper will involve a review and assessment of one of the models introduced in class or another to be identified by the student. The details of these assignments will be made clear as the semester progresses.

Each week one (or more) students from the class will be responsible for “note-taking.” The notes will be formally prepared for distribution to all seminar participants at the next class meeting. The notes should be typed and include references to all relevant readings, including all references made during class discussions and by participants.

TENTATIVE CLASS SCHEDULE AND READINGS

<u>Class</u>	<u>Date</u>	<u>Topic</u>	<u>Readings/Assignments</u>
1.	Aug 30	Introduction to “Affluenza” Eco-Footprints	Material distributed in class; Rees article on Carrying Capacity
2.	Sept 6	Ecology of Commerce Fishbanks – Mark Tompkins	Hawken book, part 1.
3.	Sept. 13	Ecology of Commerce Business thinking – Karwan	Hawken book, part 2, also “Tragedy of the Commons”
4.	Sept 20	Defining sustainability Guest – Kirstin Dow	Foreward and Ch. 1, also “Contradictions in Sustain.”
5.	Sept 27	Measurement Guest – Lynn Odom	Ch. 12, article TBD on the Sus. Systems Analysis Algorithm
6.	Oct 4	ISO-14031/Phil Barnes And Carol Robinson	Ch. 2, 3, 4
	Oct 5	“Field Trip” to Natural Step Conference in Atlanta	
7.	Oct 11	The Role of Information (Sweigart)	Ch. 5 & 21, articles by Cohen and Lovins et al
8.	Oct 18	Community-Based Sustainability Guest – Reg Hutchenson	Reading from “Beyond the Limits”
9.	Oct 25	Life Cycle Assessment (Karwan)	Ch. 13, articles TBA
10.	Nov 1	Guest – Leland Gauron (Westvaco Corporation) Eco-Blancing	Ch. 6 & 7
11.	Nov 8	Guest – Peter Gruence (Sonoco Products) Reverse Logistics	Articles TBA
12.	Nov 15	International Perspectives Guest – Jeff Arpan (USC)	Ch. 8, 18, 19, 25-27
13.	Nov 29	Presentations	
14.	Dec 6	Presentations	

SUPPLEMENTAL READING LIST

- [1] William E. Rees, "Revisiting Carrying Capacity: Area-Based Indicators of Sustainability," Population and Environment: A Journal of Interdisciplinary Studies 17 (1996), #3. Also at <http://208.240.253.224>.
- [2] Garrett Hardin, "The Tragedy of the Commons," Science 162 (1968), 1243-1248.
- [3] S.R. Dovers and J.H. Handmer. 1993. "Contradictions in Sustainability," Environmental Conservation, Vol. 20(3): 217-222.
- [4] Mark A. Cohen, "Information as a Policy Instrument in Protecting the Environment: What Have We Learned." Working paper, Owen Graduate School of Management, March 2000.
- [5] Amory B. Lovins, L. Hunter Lovins and Paul Hawken, "A Road Map for Natural Capitalism," Harvard Business Review, May-June 1999, 145-158.
- [6] D.H. Meadows, D.L. Meadows and J. Randers, Beyond the Limits, Chelsea Green Publishing Co., Post Mills, Vermont, 1992, various pages.