

# **SYSTEMS THINKING AND SUSTAINABLE BUSINESSES**

Course Syllabus, Spring 2006  
1270 Grainger Hall

IES 400, LECTURE 1  
GEN BUS 765, LECTURE 1  
GEN BUS 365, LECTURE 1

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A Joint Effort of the  
**SCHOOL OF BUSINESS**  
And the  
**GAYLORD NELSON INSTITUTE FOR ENVIRONMENTAL STUDIES**  
  
**UNIVERSITY OF WISCONSIN - MADISON**

## **Objectives:**

This course is for students interested in the role of systems thinking in finding a way to implement the concept of sustainability. In spite of its name, this is not a course about theory, but will look at ways that the concept of sustainability can be operationalized. In short, this is a course about taking the idea of sustainability into the real world.

Sustainability (or sustainable development – I use the terms interchangeably) refers to balancing economic progress with environmental care and concern for the community. For many companies, this means maximizing economic performance while minimizing the environmental impact of operations and contributing to community development.

Increasingly, sustainable development is being recognized as a driver of innovation and value creation in the private sector while at the same time protecting an organization's standing in the community. Though this is not solely a class about society's growing interest in corporations (both from a social and environmental perspective), it is clear that business plays a central role in our progress (or our lack of progress) toward sustainability. As one of, if not THE, dominant social institutions of our time, corporations have the financial resources, the technology, the know-how and the global reach to lead the quest for a more sustainable relationship with the natural world. Without the involvement of the business community in reshaping how we think about our individual and collective responsibility to the earth and future generations, our chances of successfully navigating the very troubled waters ahead of us are slim.

This class brings together Business School students with students from the Gaylord Nelson Institute for Environmental Studies (and other schools and programs on campus) to dialogue on the relevance of sustainability in a focused and constructive way. It has been organized to give you better insights into how sustainable development can be a part of most decisions that are made, whether at the individual lifestyle level or at the organizational level. The class will consist of lectures supplemented with student discussions based on readings and case studies, and information gathering and writing about ways that we can change things right now so that as a society we are able to live in a more sustainable manner.

The key benefits of the class include:

- understand sustainable development as an important element of business practices and a value driver
- see how environmental and social issues are an integral (and complex) part of the landscape in which business operates
- learn about emerging trends in institutional investment that are pushing sustainable development further into mainstream investing
- appreciate the inter-relatedness of business systems and natural systems
- help identify next steps to better leverage sustainable development activity in your personal lives

**WARNING:** This class carries a relatively heavy reading load for most of the semester. You will be required to indicate that you have done the readings each week (see below). You will learn as much from the preparation of the readings as you will from the lectures. It is essential therefore that you **be present and be prepared to discuss** the major themes from the readings.

*This is not a course geared toward "passive learning". Your purpose for being in this class should not be to passively receive information from "experts", but rather to actively engage in your own inquiry and restructure your thoughts about, and your relationship with, the concept of sustainability.*

A substantial amount of "out-of-class" time will be required as you work with classmates toward the production of a final project. In addition, we will meet on Sunday afternoon/evening of April 9<sup>th</sup> to begin a laboratory session that we will finish up during class time on April 10<sup>th</sup>.

*This class will formally introduce the concept of personal integrity through your responses to the readings each week. This university does not teach about the importance of integrity in any systematized way; however, I believe that any individual's future success in whatever they choose to do is attributable, to a large degree, to their personal integrity. Personal integrity isn't achieved through inoculation. It's a process. Rooted in core ethical values, it shapes itself, decision by decision, across a lifetime. It depends on consistency, continuity, and repetition. So tell the truth, deliver what you promise, let your caring show, and your integrity will shine through for all to see.*

*I will ask that you email the class each week brief comments, reflections or questions from the readings you have done. Please don't send anything if you haven't really done **ALL** the readings--ala the integrity issue. To say it again, even with the best of intentions sometimes work just doesn't get done. If your actions are guided by your integrity, you will not submit anything that week.*

As described above, each week you will be asked to post an email to the class listserv ([genbus365-1-s06@lists.wisc.edu](mailto:genbus365-1-s06@lists.wisc.edu)) that contains brief comments, reflections or questions about the week's readings, due by 10:00 p.m. on the Sunday before class. For example, this email might reflect your understanding of the readings and the relationship of the readings to each other or to one (or more) earlier classes. One way to do this is to pick a sentence or so each week that you would like to put up on your refrigerator, mirror, etc and reflect on why that sentence is one that you would want to remember. Keep your responses **SHORT!** There will be a lot of responses each week, and I am reading them all, so keep your response to a paragraph or two.

You will also be assigned two short writing assignments during the semester. Short means 2 pages (standard margins, **single spaced** and 10 point or 12 point font). It is important to note that you will be graded on both the content and **your writing skills**. This means that your story or your factual arguments and logic are given equal weight with grammar, paper organization, development of your ideas, and other writing skills. Being able to say what you need to say concisely is an important skill to learn.

Anna Hillary & Josh Clement will be the TAs for the class. They will host a voluntary discussion section each Wednesday (unless a majority of folks favor another evening). This discussion section arose from student requests for more time to talk about some of the ideas and issues that arise in the readings, or that the guest speakers talked about. At the beginning of the semester, I recommend that you attend a discussion section to judge for yourself whether this is something that you want to attend regularly (think about these as optional review sessions before an exam). Once project teams are set up, at least one member from each project team is required to attend to provide an update on their team's progress. No exceptions for this. You must have one member from your team at each week's discussion section. These are designed to be a way to get you started on your projects early in the semester.

We will start off each class with music that you are familiar with. This is done for two reasons; 1) recent research suggests that starting off a class with music creates an ideal learning environment, 2) much of the

music of the last 20 years is full of messages about sustainability – either from the community or environmental side. I will send out lyrics to many of the songs that we will play during the semester. If you are not familiar with the lyrics, spend a bit of time looking through them.

Einstein said “*The significant problems we have cannot be solved at the same level of thinking with which we created them.*” We need to find new ways to think about the challenges that lie ahead of us, and find creative ways of meeting those challenges. Thus, even though you did not sign up for a humanities class, you will be required to do some creative work. This creative work will require you to use the creative sides of your brain, not just the analytical side, so humor me here. For eight of the weeks, I will ask you to write poetry. I will send you an assignment to help focus you, but you do not need to do the assignment. You do however, need to write three poems each week. Poems can be long or short, rhyming or not, but they must be somehow about your awareness of the world, your relationship with the earth, or your relationship with each other or the place that you are living.

Finally, you will work in groups on a project that will not only satisfy a major portion of your grade, but will also satisfy a research and analysis need of a local business, a local governmental entity or non-profit. This assignment is described in more detail in a handout to be provided during the first class period. The first part of your final paper will provide the basic detail about a sustainability topic identified by your client. This part of the paper should then serve as background material for your recommendations on how to meet your client’s needs. You will be asked to recommend an action or develop a plan, and describe how it could be implemented by your client. In general, your final project will be an advocacy piece to convince a decision-maker to take an action. You must develop your most convincing argument(s) and be prepared to answer objections (it costs too much, no one would want to do this, etc.). This is NOT your traditional academic paper, and if you insist on writing a traditional research paper, you will have missed the point of this assignment. You must talk with your client, and quite probably others in the field, as you undertake your project. I think you will find it useful to distinguish the kind of writing you have learned to do in an academic setting from the kind of writing you will be asked to do in the real world.

## ***GRADING***

20% of your final grade will be based upon Citizenship - includes attendance, teamwork on project, classmate respect and support, attitude, interest, appreciation, enthusiasm, active and productive participation and attention in class, showing familiarity with readings and knowledge of topics.

20% of your final grade will be based upon your papers.

15% of your final grade will be based upon your poetry.

35% of your final grade will be based upon your paper.

10% of your final grade will be based upon your presentation of your final paper.

**In fairness to others in the class, late submissions of the written material will be penalized at a rate of 20% of the submission's value per day (e.g., your final papers presented one day late will receive at most a weight of 28 out of the 35 points available).**

# **LIST OF MATERIALS**

## **Books:**

Presence: Human Purpose and the Field of the Future, by Peter Senge, et al (Cambridge, MA. Society for Organizational Learning, 2004) \$25.00 [available on-line at <http://store-solonline.org/PublicationsAndVideo.html>]

The Lorax, by Dr. Seus (New York, NY Random House, 1971). \$14.95

One From Many: Visa and the Rise of Chaordic Organizations, by Dee Hock (San Francisco, CA. Berrett Koehler Publishers, 2005) \$18.95

What the Bleep Do We Know: Discovering the Endless Possibilities for Altering Your Every Day Reality, by William Arntz, Betsy Chasse and Mark Vicente (Deerfield Beach, FL. Health Communications Inc, 2005) \$26.95

## **REQUIRED READINGS:**

Reading Packet available from Underground Textbook Exchange and printed on 100% post-consumer recycled paper (meaning that this is paper made from the paper that is recycled at the university and government buildings)

**Recommended Books:** Democracy's Edge, by Frances Moore Lappe (San Francisco, CA, Jossey-Bass, 2006) \$24.95

## January 23) *Introduction*

The first class is designed to accomplish six things. First, the goals, purposes, structure and format of the class will be made clear through a review of the syllabus and other relevant materials. Second, students will fill out information about themselves and indicate what grade they intend to work for in the class. Third, we will discuss the purpose and structure of the creative exercises that you will be asked to do. Fourth, we will discuss the final project with representatives from some of the potential clients. Fifth, we will work in teams to solve a problem that requires that we start thinking outside of the box. Finally, we may define sustainability and start talking about what we mean when we use this term.

## January 30) *Laying the Foundation: Sustainability as we now Know it*

This class will be designed to establish a common groundwork for where we will go during the semester. I will talk about sustainability on a conceptual level, and then illustrate how some of these ideas are being implemented by businesses. We will talk about various frameworks for thinking about sustainability, and I will use The Natural Step as an example of one framework, and how it can be important in guiding people's understanding, and thinking.

**READINGS.** Remaking the Way We Make Things, by Bill McDonough and Michael Braungart, in Innovation, Summer, 2005.

Going Organic: Converting Patagonia's Cotton Product Line by Yvon Chouinard and Michael Brown, case study published in Vol 1 No. 1 Journal of Industrial Ecology, 1997.

One From Many, first quarter of the book (I'll be more specific in class)

## February 6) Critiquing Sustainability

The classical definition of the [Bruntland report](#) suggests that sustainability is a state of meeting the needs of today without sacrificing the needs of the future. Problem is we don't have any idea of what the needs and capacities of the future will be. Lewis will share his belief that we need to move our sustainability focus closer to the present. He will speak about his take on sustainability, which is summarized by saying "*Sustainability is the existence at any given time of a set of possible futures which are acceptable in some [satisficing](#) sense.*" The notion of an evolving set of satisficing possible futures is central. It does not imply futures are given, but that they are created. The need to steer toward desired possible futures will illuminate priorities with respect to resource allocations.

**GUEST LECTURER:** Lewis Gilbert, Associate Director, Nelson Institute for Environmental Studies, UW-Madison

**READING:** Revealing the Value of Sustainable Development, by Joseph Fiksel, Corporate Strategy Today, monograph series available at [www.ahcgroup.com](http://www.ahcgroup.com).

New Belgium Brewing Company: Brewing with a Conscience by Christopher Asher, Elina Bidner & Christopher Greene, case study from Univ of Colorado at Boulder (2002).

One From Many, second quarter of the book (I'll be more specific in class)

## February 13) *Systems Thinking and Sustainability*

Systems thinking has so much to do with sustainability, that it will be a theme that constantly reappears in our discussions throughout the semester. Systems thinking is a mental framework for seeing interrelationships rather than things, seeing patterns of change rather than static 'snapshots', and viewing societies and economies as integrated parts of the biosphere. Understanding what we mean when we talk about systems thinking is thus critical. For many people, systems thinking helps explain why we have found ourselves in the mess we are in. The flip side of that coin, is that systems thinking explains why we are so well off, even given all the stupid stuff we are doing. Tim will start the discussion on systems thinking which we will return to at several points during the semester.

**GUEST LECTURER:** Tim Allen

**READINGS:** Systems Thinking – a Mental Model for Sustainable Futures, published in Sustainable Development Update, Issue 1, No. 4, 2004.

Places to Intervene in a System by Donella Meadows, Whole Earth, Winter 1997.

Dancing with Systems by Donella Meadows, published in Timeline, Mar/Apr 2004 (available on-line at <http://www.globalcommunity.org/timeline/74/index.shtml#1>).

One From Many, third quarter of the book (I'll be more specific in class)

## **February 20) SYSTEMS THINKING AND BUSINESS DRIVERS**

Systems serve to protect the status quo. Before you understand anything else about systems, you must understand this point. However, all systems can also be used to change the status quo. With the proper pressure, systems can be a powerful ally in bringing about change – even while they are protecting the status quo. Illogical? Not at all.

**GUEST LECTURER:** Claudia Haack, founding member of the Chaordic Commons, and consultant with Sonant Strategies

**READINGS:** Selected excerpts from the Sacred Balance by David Suzuki, Prometheus Books, Amherst, NY 1998.

Total Corporate Responsibility: Achieving Sustainability and Real Prosperity by Frank Dixon, personal communication (2003).

Forest Stewardship Council, by James Austin, Case Study from the Harvard Business School, No. 9-303-047 (2003).

One From Many, last quarter of the book (I'll be more specific in class)

**PAPER ASSIGNMENT:** Working in pairs, you are to read the Dr Seuss classic “The Lorax”, and then write your own children’s story about an environmental issue. You can choose from one of the following issues, or choose one of your own: global warming, species extinction, over-population, over-consumption, build-up of toxics in our world, ozone hole, growing dead areas in our oceans, starvation, accessibility to clean water, soil loss/erosion, vanishing rainforests, or plunging fish stocks. You may illustrate your story – and the illustrations need not be your own (you can use illustrations from magazines, the internet, graphics software programs, newspapers or anywhere else). It does not need to be as long as The Lorax. Decide on the point(s) that you want to make and how you can explain this point so that a child

can understand it. This is going to be hard, so two of you can exercise your creativity together.

## **February 27) *Why systems thinking is necessary for a sustainable economy***

John is in town for the week to meet with a variety of different groups. He is a retired professor and has done a lot of thinking about sustainability and its relationship to our current world. He will be talking about moving toward a more sustainable economy and the role of systems thinking in that movement. Though we will still be talking at a rather abstract level about our economy, this class is one of the classes that illustrates the way systems thinking can be put to use.

**GUEST LECTURER:** John Ikerd, Author of ***Sustainable Capitalism: A Matter of Common Sense***

**READINGS:** Lines in the Mind, Not in the World by Donella Meadows, published in Timeline, Jan/Feb. 2002 pp. 19-21.

One Man's Drive... One Company's Courage by Charles Fishman, published in Fast Company, Issue 71, June, 2003 (available on-line at <http://pf.fastcompany.com/magazine/71/courage.html>).

Deja Shoe (A) & (B), by Paul Hardy, Case study from Corporate Environmental Management Program, 1996.

What the Bleep, 2- 62

## **March 6) *Spiral Dynamics: How do you effectively engage a street gang, a political group, and a high tech start up team?***

Expanding upon the ideas of systems thinking, as What the Bleep has you doing, we will explore other ways to use some of these ideas. Spiral dynamics starts with the supposition that you are not one person, you are at least 9 people. Its impossible to tell from within you as you are interacting with the world, which you are. Only longitudinal and large cohort studies expose these nine levels and their characteristics. How effective can you be with others if you are ignorant of who you are, and who they are? The field of Integral Studies, and the sub area Spiral Dynamics offers a way to more comprehensively view what is happening, e.g. South Africa transitioned out of Apartheid, WITHOUT a civil war, by using the Spiral Dynamics model.

**GUEST LECTURER:** Tom Christenson, Integral Studies Consultant

**READINGS:** A Systemic Approach to Occupational and Environmental Health, by Skip Spitzer, published on-line at [www.rachel.org](http://www.rachel.org), May 12, 2005.

Additional readings are available at Tom's web-site (to be provided)

What the Bleep, 63 - 130

**PAPER ASSIGNMENT:** Second paper due. In preparing for this paper, you are required to make an appointment with a Congressperson, Senator, state legislator, Governor, Mayor, County Supervisor, County Board representative or city council representative and discuss with them what their main priorities are for the future. Go into this interview with a set of questions that will allow you to understand where their main interests lie. After gathering this background information, your paper is a series of recommendations to the person that you interviewed on how they can incorporate the concepts of

sustainability into the issues that are important to them. You are to send them a copy of your paper, with a copy to me.

Your paper can not exceed two single spaced pages with regular margins and no smaller than a 10 point font. It must indicate what the key issues of the person you talked to are, and then you must weave your recommendations into these issues. For instance, if a key issue was tax reduction, you could recommend how taxing pollution is far superior to taxing people's labor, and that subsidies are in fact working against sustainability principles, at least in many instances.

**The important point with this assignment is to get started early. It will require making an appointment and talking with one of the above people before you can write this paper.**

### **March 20)** *Making the Business Case for Sustainability: Socially Responsible Investing and the Role of the Financial Community in Sustainable Development*

Hopefully by now you will realize that sustainability (also called corporate social responsibility) should be on the radar screen of every business. There are tremendous benefits to those businesses that successfully understand and integrate these concepts into their decision making. Or are there? Is this just a bunch of liberal BS? John will talk about how the market is rewarding those businesses that are staking out some territory in the environmental and social responsibility area. One way to encourage businesses to begin exploring what sustainability might mean to them is to get their attention through investment decisions. More and more people are choosing to invest their dollars only with companies that pass certain environmental and social screens. Investing with a conscience is the area of greatest growth in the investment community.

**GUEST LECTURER:** Bruce Kahn, Financial Consultant, Smith Barney, NY

**READINGS:** Letter to the Editor from Paul Hawken, The Green Money Journal, (Feb/March, 2003)

Working Capital: Can Socially responsible Investing Make a Great Green Leap Forward by Marshall Glickman and Marjorie Kelly

Social Investing: Challenging Institutional Investors to Meet their Fiduciary Responsibilities, by Timothy Smith, published by the Social Investment Forum (2004)

Anatomy of a Corporate Campaign: Rainforest Action Network and Citigroup (A), case study published by Stanford University (2004).

What the Bleep, 131 - end

### **March 27)** *Making the Business Case for Sustainability: Reputational Risk*

Think about this list of companies, Johnson & Johnson, Nike, Exxon, Microsoft, Shell, Union Carbide, the Gap, Firestone and IBM. Is their reputation positive or negative? Do you know why you have a positive or negative feeling for each of these companies? Do you think that positive or negative reaction to the corporate name affects the company in the marketplace?

Corporate reputation is extremely important to most businesses. It often goes to their "social license to operate", which is granted by society. Though we no longer have the ability to revoke a corporate charter when it no longer serves the public purpose that the corporation was originally created to serve, we have recently seen the equivalent of this power with companies like Arthur Anderson. They stopped attracting clients and were eliminated from the marketplace. Thus,

reputation is something that many companies care a great deal about.

Dan will talk about his recent research in this area, and how companies are responding to the threat of boycotts and public criticism while trying to attract positive press.

**GUEST LECTURER:** Dan Anderson, Leslie P Schultz, Professor of Risk Management and Insurance.

**READINGS:** Are You Being Served? Published in The Economist, April 21, 2005

Executive Summary from The Changing Landscape of Liability, published by SustainAbility and available at <http://www.sustainability.com>.

Blooming Liabilities by Roger Cowe, published on-line at <http://www.greenfutures.org.uk/features/default.asp?id=2153>. (available by subscription only)

Interface's Evergreen Services Agreement, Harvard Business School Case Study No. 9-603-112 (2003)

Presence, Intro - 114

### **April 3) *Personal Values and the Challenge of Sustainability***

The importance of hope is central to the message that I want you to leave this class with. Hope comes in all shapes and forms. Too often we hear messages about the environment that fill us with fear. Now is the time to put fear behind us, and to realize how many reasons there are for hope.

**GUEST LECTURER:** Dave Boyer

**VIDEO:** Celebrate What's Right with the World, by DeWitt Jones

**READINGS:** Walking the Walk, by Jennifer Reingold, in Fast Company, Issue 100, Nov 2005, p. 80.

Patagonia: The Next Hundred Years, by Yvon Chouinard, excerpt from Sacred Trusts: Essays on Stewardship and Responsibility edited by [Michael Katakis](#), [Russell Chatham](#), Mercury House, 1993.

Judy Wicks, case study published by The Business Enterprise Trust, No. 9-996-039 (1996)

Presence, 117 - 192

### **April 9 & 10) *Transformation: Business Strategy Laboratory***

Experiencing first hand what we have been talking about during the semester makes these lessons come alive. In order to make sustainability and sustainable business decisions real, we will be doing a simulation. *Participate will experience the process of seeing the future for themselves. In the lab teams are formed which represent companies that produce products, and individual team members take on roles within their companies. Each team makes a product and runs their company in the context of life-like conditions such as time pressures, budgetary constraints, unpredictable stakeholder interventions, changing market conditions and limited information. At the end of the decision cycle, participants sell their product in a dynamic market that allows companies to take market share from one another, and to record their decisions that result in P&L, Balance Sheet and Environmental reports. This will be a two day laboratory, and it is mandatory that everyone be available Sunday afternoon and evening. Some preparation will need to be done in advance of getting together on Sunday. Be prepared to stay until 9:30 or 10:00 on Monday.*

GUEST LECTURER: Susan Svoboda

**READINGS:** The Role of Stakeholders by Erik Assadourian, published in World Watch magazine, Vol 18, NO. 5, Sept/October 2005.

Rewarding Virtue: Effective Board Action on Corporate Responsibility, Executive Summary, Nov 2005

**April 17)** *Tying it all together*

Past classes have asked for an opportunity at the end of the semester to talk about what we have just been through. In addition, we will take some additional time to debrief after the simulation. I will guide this last discussion.

**VIDEO:** Why We Buy, BBC Worldwide

**READINGS:** Twenty First Century Leadership, by Lee Scott, published on-line at [www.walmart.com](http://www.walmart.com). Oct. 24, 2005

The Greening of Goldman Saks, by Traci Hukill, published on-line at [www.alternet.org/story/29901](http://www.alternet.org/story/29901).

Presence, 193 - 253

**April 24)** *Final papers due and first presentations of Final Papers to entire class.*

**May 1)** *Presentation of remainder of Final Papers to entire class.*

**Summary Schedule:**

**January 30: Project preferences due.**

**February 6: Project assignments distributed**

**February 20: 1<sup>st</sup> paper due**

**March 6: 2nd paper due.**

**April 24: Final papers due. Presentation of first papers (this is a formal presentation).**

**May 1: Presentation of rest of papers (this is a formal presentation).**

**"Teachers open the door, but you must enter by yourself."**

**-- Chinese Proverb**