

Special Topics:  
**Learning from the Bioneers**  
Course Number: 4801D  
One Credit

**Cross Listed:**

School of Biology *and* College of Architecture; Georgia Institute of Technology  
*This course does not count toward Biology elective credit.*

**Instructor:**

John Mlade (Perkins+Will)

**Instructors of record:**

Jeannette Yen (Biology), Chris Jarrett (Architecture)

**Location:**

Tuesdays, 4:30-5:30pm  
Cherry Emerson 322

**Course Objective:**

Based on the Bioneers conference ([www.bioneers.org](http://www.bioneers.org)), this course will demonstrate how biological knowledge can be applied to today's complex social and environmental issues to create a more sustainable world. The course will utilize videotaped lectures, including talks by world-renowned geneticist, *David Suzuki*; mycologist, *Paul Stamets*; Biomimicry expert, *Janine Benyus*; and others such as *John Todd*, *Thomas Linzey* and *Amory Lovins*. Weekly 50 minute classes will be comprised of these lectures - followed by group discussion, critical thinking exercises, and supplementary material. Grading will be based on the quality of student questions and participation, in class exercises, and homework assignments.

**Course Procedure and Organization:**

Weekly classes will be comprised of recorded lectures - followed by group discussion, critical thinking exercises, and supplementary material.

**Required/Suggested Readings:**

Weekly readings will be limited and complement course material. There are no required texts.

**Course Requirements:**

Grading will be based on the quality of student questions and participation as follows:  
*50% for leading class discussions; 30% for 6 class exercises; 20% for 10 homework assignments.*

**Leading Discussion:** Every student will be required to lead discussion one time this semester. Depending on the number of students enrolled, some discussions may be led by groups of two. Be prepared to lead discussion solo.

Students leading discussion should have performed informal preliminary research of the topic of discussion, i.e. do a web search or read an article or two.

As part of leading discussion, you will be required to develop a list of 12-15 quality questions pertinent to the topic that week. These questions will be used to guide discussion. You should bring enough copies of your questions to hand out to the class prior to our viewing of that week's Bioneers video.

*Example:* Questions for today's discussion

1. What is sustainability?

2. Is sustainability only theoretical, or are there "real" applications?
3. What are successful examples?
4. Can the concept of sustainability be applied to systems such as communities or corporations, or is it limited to applications or products such as efficient cooking stoves and organic cotton?
6. Are indigenous people sustainable? Why? Why not?
7. What do we want to sustain?
8. If, in the long haul, Earth will fix itself, what is the point of conservation and sustainability?
9. Why not just live and be happy and accept the fact that humans are not intended to "be around" for all that long (on a geological time scale)?
10. Is there anything beyond sustainability?
11. What is restorative design?
12. What is regenerative design?
13. What is the difference between restorative and regenerative design?
14. Is sustainability spiritual?

I realize that additional questions will be generated from the videos and should be added to your list as you think of them. You will turn this list in with a summary of student responses and a synopsis of the class discussion.

**Readings:** There may be occasional class readings of (1) works by plenary speakers, (2) specific presentation topics such as genetic engineering, or (3) general sustainability related topics. Readings will be distributed the week prior to their discussion.

**Topics:** The following is the likely schedule for the semester and is subject to change. I am open to altering it to best fit the interests of our group.

Wk 1 – Air, Water & Soil - DAVID SUZUKI

Wk 2 - What Life Knows: New Ideas from Biology that Could Change the World - JANINE BENYUS

Wk 3 - Applying Mycology to Contemporary Challenges - PAUL STAMETS

Wk 4 - The Role of Corporations in Democracy - THOMAS LINZEY

Wk 5 - Intelligence in Nature - JEREMY NARBY

Wk 6 - Neuro-Linguistics and Communication - THOM HARTMANN

Wk 7 - Global Warming: A Climate of Fear and Opportunity - BILL MCKIBBEN

Wk 8 - The Color Of Sustainability - LADONNA REDMOND

Wk 9 - The Value of Natural Systems in Urban Areas - ANDY LIPKIS

Wk 10 - Greening the Inner City: Jobs, Health, Justice and the Environment - OMAR FREILLA

Wk 11 - Emulating Nature's Design Genius - JAY HARMAN

Wk 12 - Global Energy Issues - AMORY LOVINS

Wk 13 - The Ecological Design Revolution - JOHN TODD

Wk 14 - GSA's "Sustainability 2000 Workshop: Highlight of William McDonough Speech"

Wk 15 – McDonough Discussion and Wrap-up