

ER 190-002 Behavior and Sustainability

Spring 2011 (3 credits)

Tuesdays and Thursdays, 5:00 – 6:30 pm

104 Barrows Hall

COURSE DESCRIPTION

The aggregated effects of billions of individual decisions each day have large adverse effects on human and ecosystem health, natural resource stocks, and global climate change. While the causes of environmental degradation are anthropogenic, so too are the solutions. This course examines different perspectives on the motivations of human behavior, drawing on diverse disciplines, including psychology, economics, and sociology. Theories of behavior change and behavioral intervention case studies will inform student efforts to design viable programs that promote improved sustainability through behavior change.

INSTRUCTORS

This course will be co-facilitated by doctoral students Chris Jones and Joe Kantenbacher of the Energy and Resources Group under the direction of Professor Isha Ray.

Chris Jones – cmjones@berkeley.edu

Joe Kantenbacher – kantner@berkeley.edu

Office hours available by appointment.

Course grader: Mia Yamauchi – miayamauchi@berkeley.edu

GRADING

- 1. Class participation: 15%** - Students are expected to be actively engaged with course materials, and to discuss, debate, opine, and ask questions. As such, a portion of the final grade will be based on a student's contribution to the communal learning process. It should be noted that there are many ways to "participate," including speaking in class or posting thoughts on an online class forum. Students are expected to have read the weekly readings (see the week-by-week listing below) before class on Tuesday.
- 2. Literature reviews: 30%** – In addition to the weekly readings, students will select three unique papers to read, present to the class, and use to help build an annotated bibliography. Students will give a five-minute presentation on their paper, discussing the major insights, experimental methodologies, and key questions raised by the paper. Within a week of this presentation, the presenter will submit an extended abstract of the paper for inclusion in an annotated bibliography of behavioral papers.
- 3. Group project midterm report: 20%**– The class project involves student groups selecting from a range of "clients" from on campus and in the community who have or are interested in developing or improving a behavioral intervention. Students will evaluate the needs of the client as well as the relevant characteristics of the intervention

and its target population. The midterm report will describe the program client, describe the nature of the behavioral intervention (highlighting the relevant behavioral theory), and detail a work plan for the remainder of the semester. Assignment description to be distributed during the semester. **(due March 10)**

- 4. Group project final report: 35%** - Assignment description to be distributed during the semester. **(due May 5)**

READING

All required readings will be posted to the course bSpace site. Assigned readings should be read prior to class on the day for which they are listed.

Week 1 – Introduction and Organization

Tuesday (1/18) – Introduction

Discussion of course objectives and syllabus

Thursday (1/20) – Brainstorming session

Prior to the formal introduction of material, students will identify sustainability-related behaviors to change and develop ideas for promoting that change

Week 2 – Defining the Problem of Sustainability

Tuesday (1/25) – Lecture

A history of sustainability, different definitions, measures, and trends

ASSIGNED READING:

IPCC Synthesis Report – Executive Summary for Policymakers

Millenium Ecosystem Assessment. Living Beyond Our Means, NATURAL ASSETS AND HUMAN WELL-BEING. Statement from the Board

Thursday (1/27) – Discussion and student presentations

Week 3 – Defining the problem of behavior and sustainability

Tuesday (2/1) – Lecture

A description of the actors and actions that undermine sustainability

ASSIGNED READING:

Excerpt: Doug McKenzie-Mohr, William Smith. 1999. “Fostering sustainable behavior: an introduction to community-based social marketing.”

Thursday (2/3) – Discussion and student presentations

Week 4 – Messaging and Marketing

Tuesday (2/15) – Lecture

Examining the effect of language and framing on behavior

ASSIGNED READING:

Debika Shome and Sabine Marx, 2009. *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aids, and the Interested Public*. Center for Research on Environmental Decisions.

Nisbet, Matthew. 2009. *Communicating Climate Change: Why Frames Matter for Public Engagement*. *Environment*. Vol 51, Number 2.

Thursday (2/17) – Discussion and student presentations

OPTIONAL READING:

Lakoff, George. 2010. “Why it Matters How We Frame the Environment.” *Environmental Communication*. Vol 4, Issue 1.

Week 5 - Theories of Behavior and Behavior Change

Tuesday (2/8) – Lecture

Major models of behavior: Rational Actor, Behavioral Learning Theory, Social Learning Theory, Theory of Planned Behavior, Value-Belief-Norm Theory

ASSIGNED READING:

Charlie Wilson and Hadi Dowlatabadi. 2009. “Models of Decision Making and Residential Energy Use.” *Annual Review of Environment and Resources*.

World Bank. “Theories of Behavior Change.” *Communication for Governance and Accountability Program*.

Thursday (2/10) – Discussion and student presentations

Week 6 – Behavioral Intervention Projects

Tuesday (2/22) – Lecture

Defining intervention categories and providing examples of types of interventions

ASSIGNED READING:

Wokje Abrahamse, Linda Steg, Charles Vlek, Talib Rothengatter. 2005. “A review of intervention studies aimed at household energy conservation.” *Environmental Psychology*

Andrea Liverani. 2009. “Climate Change and Individual Behavior.” World Bank research paper.

Thursday (2/24) – Discussion and student presentations

Week 7 – Behavioral Intervention Projects, Continued

Tuesday (3/1) – Lectures

Lessons learned from intervention case studies

ASSIGNED READING:

Vandenburgh, et al. 2010. “Implementing the Behavioral Wedge: Designing and Adopting Effective Carbon Emissions Reduction Programs.”

Thursday (3/3) – Discussion and student presentations

Week 8 – Intervention Design and Measuring Impacts

Tuesday (3/8) – Lecture

How to properly set up behavioral interventions, and how to draw conclusions from collected data

READINGS TBD

Thursday (3/10) – Discussion and student presentations

- MIDTERM PROJECT REPORT DUE

OPOWER

SAM – EVOLUTION???

YONNIE LEUNG, SUSTAINABLE CORPORATE CULTURE

CARES, APPROPRIATE TECHNOLOGY AND DESIGN

SASCHA VON MEIER, SMART GRID AND BEHAVIOR

LAURA SCHEWEL, TRANSPORTATION AND BEHAVIOR

Week 9 – Special Topics 1

Tuesday (3/15) – OPower

Thursday (3/17) – Team 1 Project Session

Week 10 – Special Topics 2

Tuesday (3/29) – Lecture TBD

Thursday (3/31) - Team 2 Project Session

Week 11 – Special Topics 3

Tuesday (4/5) – Lecture TBD

Thursday (4/7) – Team 3 Project Session

Week 12 – Special Topics 4

Tuesday (4/12) – Lecture TBD

Thursday (4/14) – Team 4 Project Session

Week 13 – Special Topics 5

Tuesday (4/19) – Laura Schewel, Transportation and Behavior

Thursday (4/21) - Team 5 Project Session

Week 14 – Special Topics 6

Tuesday (4/26) – Lecture TBD

Thursday (4/28) – Class overview and wrap-up

RRR Week – Project Party

Thursday (5/5) – Final briefings on semester reports

* FINAL PROJECT REPORTS DUE