Ethics and Decision Making in Green Product Design: Business, Science, and Policy Perspectives

ESPM 290 and MBA 296.1A (CCN 30165)

**When:** Wed. 2-4 pm during first seven weeks of the Spring 2012 semester

**Where:** Cheit 250

**Instructors:** Christine Rosen (Haas), Alastair Iles (ESPM) and Joseph Guth (Berkeley Center for Green Chemistry)

**SYLLABUS**

I. **Introduction and Learning Objectives**

This 1 credit seminar will explore some of the personal, business, legal and political conflicts that complicate society’s efforts to transition to a green chemistry economy, as seen through an ethics lens. Our focus is on the different approaches to resolving ethical issues raised by the social objective of minimizing harm to human health and natural ecosystems through green product design.

Some of the ethical conflicts we will examine are personal in nature. As the green chemistry economy emerges, scientists, engineers, business leaders and others involved in the development, design, testing, and marketing of new products must make decisions in the context of evolving social norms and competing organizational objectives. This can raise for individuals a variety of dilemmas, and can challenge them to develop a personal ethical viewpoint. We will explore whether individuals have an obligation to adopt new social norms even if they are not required to do so by law or are not supported by their organizations, and what the bases for those obligations might be. We will also explore the challenging ethical issues underlying whether organizations (including firms) have any obligation to green their products over and above that required by law.

Ethical values also form a critical element of how the United States makes legal and public policy decisions that promote or constrain the development, production, and marketing of green products. While these decisions usually purport to rely on technical issues of science and economics, they, too, are in fact often grounded in ethical postures toward economic growth, future generations, other species, and distributive justice within and between societies worldwide. We will examine the role that the debate over different ethical approaches and viewpoints plays in the development of laws that could promote innovation in the area of environmental sustainability, green chemistry and green product design.
II. Intended Audience

Graduate students in a variety of Departments at U.C. Berkeley, including the College of Chemistry, Haas School of Business, College of Natural Resources, School of Public Health, School of Law, Goldman School of Public Policy, Molecular Toxicology, Education, Engineering and others.

III. Prerequisites

Graduate standing, or undergraduates with instructor approval.

IV. Course Textbook

Required: Course Reader at Copy Central on Bancroft.

V. Lead Instructors

Prof. Alastair Iles, Environmental Science, Policy & Management (iles@berkeley.edu)

Prof. Christine Rosen, Haas School of Business (crosen@berkeley.edu)

Dr. Joseph Guth, Research Scientist, School of Public Health (jguth@berkeley.edu)

VI. Office Hours

TBA

VII. Student Assignments

(1) Class Participation: Students will be expected to attend class and participate in class discussion. Course readings are an essential part of this course and will be integral for the successful completion of your term paper. All students will need to have name plates that display their names in large, very visible capital letters.

(2) Class Assignment: There is a very short research assignment for class no. 5. There may be other short assignments as well.

(3) Term paper: 5-10 page paper. The instructors of the three three green
design mini courses sponsored by the Berkeley Center for Green Chemistry are considering holding a joint session at the end of the semester. If we do this, you will have the opportunity to meet with students from all three courses and share your paper and your thoughts about the issues covered in this course with them - and to learn about what they have been working on. The goal will be to generate a more holistic perspective on the challenges and opportunities of green product design.

VIII. Course Expectations

**Respect:** Our goal is to create an interdisciplinary class where ideas can be freely exchanged. This will only be possible in an atmosphere of respect where everyone is free to express ideas and ask questions. With so many different disciplines represented, your instructors will strive to avoid discipline specific jargon, and will gladly explain unfamiliar terms and concepts. We expect students to show the same respect for and interest in all the the many disciplinary and ethical viewpoints we and your fellow students bring to bear in our discussions.

**Plagiarism:** Official university policy states that “students who submit plagiarized work will be subject to consequences ranging from a grade of F on the assignment to suspension from the university.” The Campus Office of Student Judicial Affairs has produced a guide to academic honesty: [http://uga.berkeley.edu/sas/rtf/guide_student.rtf](http://uga.berkeley.edu/sas/rtf/guide_student.rtf)

IX. Course Calendar

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<td>2</td>
<td>January 25</td>
<td>Ethics and Decision Making at the Organizational Level</td>
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<td>Ethics and Decision Making at the Personal Level</td>
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X. Detailed Course Outline And Reading Assignments

Week 1 (January 18)
Introduction to the Course: Green Product Design and Ethics
Professor Christine Rosen, Professor Alastair Iles, Dr. Joseph Guth

This session introduces students to the entire course. We will discuss the two main theories of normative ethics, utilitarian (consequentialist) and deontological (non consequentialist) theories in order to give students a conceptual framework for thinking about why ethical issues that complicate the project of making products safer and more environmentally benign is so contested. We will provide a classroom exercise to help students understand the distinctions between and the implications of the different models of ethics. We will also ask students to share why they are taking the course and what kinds of ethical questions they believe that they may face later in their careers, and how they are personally inclined to decide what to do about the ethical issues that arise in their own lives. Readings:


Week 2 (January 25)
Ethics and Decision Making at the Organizational Level
Professor Christine Rosen

In this session we will focus on ethical responsibilities of firms to ensure that the products they manufacture and/or sell are safe and environmentally benign. What ethical values should guide business decision making in the area of green business design? How far do a firm’s responsibilities to its customers and the public go? Do corporations have responsibilities to green their products beyond the requirements
imposed by law? What can/should individual employees do to promote ethical analysis and behavior in their firm’s organizational practices and business strategies? In addition to the case discussion, which focuses on a ethical failure in corporate decision making, Helen Holder, HP’s Corporate Material Selection Manager, Global Engineering Services, will share her personal insights into the conditions that enable and support corporate managers who are interested in leading sustainability initiatives in their firms and industries.

Readings:


Week 3 (February 1)

*Ethics and Decision Making at the Personal Level*

Professor Christine Rosen, Professor Alastair Iles, Professor Robert Bergman, Dr. Martin Mulvihill

In this session we will discuss and debate the personal ethical implications of sustainability for individuals employed in university labs and corporations. We will focus on the challenges of doing the “right” thing in situations where this defies the status quo and/or what one’s supervisors think is appropriate. In addition to discussing the case, which focuses on ethical failings, regrets, and non-regrets of individuals, two leaders of the green chemistry movement here at UC Berkeley will speak. Marty Mulvihill, a recent UCB Chemistry Ph.D and Executive Director of the Berkeley Center for Green Chemistry, and Bob Bergman, Gerald E.K. Branch Distinguished Professor of Chemistry, will provide their personal perspectives on the challenges they faced pushing the College of
Chemistry to go green, reduce hazards in labs, introduce green chemistry to curriculum, and join the BCGC.

Readings:


Week 4 (February 8)
Ethics and Morality in the Legal System
Professor Carl Cranor, U.C. Riverside
Guest lecturer Professor Cranor will give a lecture based on his recent book that will be followed by discussion based on questions resulting from the lecture and his book.

In this session we will explore ethics and morality in a legal system that allows us to be poisoned. What normative prescriptions have become embodied in our legal system, and what considerations underlie them? What is the importance or value of law that is based on precedents and legal theories that don’t necessarily reflect contemporary ethical positions?

The class may also involve development of a scenario where students are judges in a case involving the sale of toxic chemical products.

Readings:

Week 5 (February 15)
Ethics in Institutional Governance
Dr. Joseph Guth

In this session we will introduce the idea that our environmental laws are all ultimately grounded in ethical theories and positions. We will examine the ethical structure underlying the predominant approach to environmental law and policy in the United States: the use of cost-benefit analysis (CBA). We will examine how CBA is grounded in utilitarianism and welfare economics as a tool for promoting net social welfare. Is CBA neutral or does it favor certain kinds of outcomes? Why are utilitarian values so important in our regulatory culture?

We will focus on the Toxic Substances Control Act as a specific example of a law grounded in CBA, and on an example regulatory use of CBA. We will also debate whether CBA is theoretically workable, and if so, whether it accounts for our ethical obligations to future generations, to nature and other species, and to other polities outside the US. Is this structure desirable? Can it be changed? Should it? We will examine other options suggested by recent developments in EU chemicals laws.

Assignment:
Quick Internet Search: Who is Cass Sunstein and why is he currently important?

Readings:


Week 6 (February 22)
The Public Ethics of Greening Chemistry
Professor Alastair Iles, Dr. Joseph Guth

This class will build on the previous week’s material by switching focus to the tensions that pervade more environmentally protective forms of democratic decision-making. We will examine the deontological ethical underpinnings of approaching sustainability issues through policies founded on the precautionary principle, environmental justice and ecological economics as the normative bases for public action. Can or should government adopt an ethical position other than aggregating utilitarian welfare maximization? How do democracies decide on the ethical issues underlying chemicals policy and environmental policy generally? Should technical experts be making the choices? Or should citizens in a democracy be able to make decisions that experts applying cost-benefit analysis find unreasonable?

We will also examine how the central legal provisions of proposals to reform the Toxic Substances Control Act reflect the ethical underpinnings and normative judgments of the precautionary principle, ecological economics and environmental justice. Perhaps the most important of these are the recent EU chemicals laws, particularly REACH.

Readings:


3. One page of Assembly Bill No. 1879 (Feuer 2008) (One of two Green Chemistry Initiative laws signed by Governor Schwarzenegger in 2008). Read Section 25253(a)(1) on page 4 of AB 1879, available at:
Week 7 (February 29)
Participatory Ethics
Professor Christine Rosen, Professor Alastair Iles, Dr. Joseph Guth

In this session we will pull the whole course together by analyzing of the role and contribution of participatory processes to greening chemistry. Does participation equate to ethics, or are there ethics in participation? Can participatory processes help advance the cause of making products safer and more environmentally benign. What is the role for “experts”?

We conclude with a discussion of the role of individuals in green chemistry as scientists, employees, corporate managers, citizens, and consumers. Can the multiple ethical views of different interests be reconciled? Should individuals adhere to decisions made by participatory processes or act on their own ethical principles?

Readings:

