



CLARKSON UNIVERSITY

School of Liberal Arts

December 10, 2002

TO: Michael Davis
FROM: Jerry Gravander *Jerry Gravander*
SUBJECT: Report on EAC Activities in HP210, Energy Park Feasibility Study

As my on-campus project for the 2002 EAC Workshop, I used professional ethics materials in HP210, Sophomore Project Course, during Fall 2002. This is a problem-based learning course in the Honors Program. The Honors Program curriculum design calls for the course to have sufficient "business" and "engineering" content to satisfy the general education requirement that every student should complete at least one course in each of the Schools of Business and Engineering for the purpose of acquainting students with the character of business and engineering practice, respectively. Past instances of the course have also included substantial public policy content. This interdisciplinary character made the course an inviting venue for introducing professional ethics material.

The specific topic for the Fall 2002 version of the course was the feasibility of implementing alternative sources of energy production on the Clarkson campus, thereby reducing our dependence on standard commercial suppliers for electricity and natural gas. Four of the five sources investigated by the students were also "green," which would improve Clarkson's position *vis-à-vis* sustainability. Last year's version of the course had investigated possible reductions in energy use on campus, so this year's course both complemented and expanded last year's study. A full description of the course is given in the attached syllabus.

Since the course used a problem-based learning approach, the majority of the scheduled class time, as well as substantial out-of-class time, was devoted to working sessions for the five problem teams. The remaining scheduled class time was used for whole-class learning activities, including three sessions related to professional ethics. The schedule for the class is attached.

Session 1. The first class session involving professional ethics materials set the context for later class sessions. One feature of the course was to provide the students with "real" clients, namely, Clarkson's Board of Trustees and the President's Cabinet, who would affect the course grade by providing "client satisfaction" feedback. (Cf., the attached "Response to Presentation.") In this session we discussed what it meant for clients to expect "professional behavior" from their consultants; looked briefly at several formal codes of ethics as examples of engineering, science, and management organizations defining "professional behavior" in their fields; and discussed Michael Davis' "Seven Step Guide for Ethical Decision Making." This packet of "Professional Ethics Background Material" is attached.

Session 2. During the second class session involving professional ethics material, we discussed a relatively simple version of a case study on the current controversy over siting a wind farm off the coast of Cape Cod. One of the student problem teams was investigating wind energy, and the other teams had seen their plan of study and initial conclusions during the mid-semester presentation to the Board of Trustees. I believe that prior to this session, all of the students in the course would have reflexively endorsed a wind farm in Massachusetts, as well as a wind turbine at Clarkson, and the discussion brought to the fore a set of ethical and public policy concerns that render both the Clarkson and Massachusetts situations more complex and equivocal. The classroom methodology was for each team to discuss the case and the ethical issues they thought it raised in terms of the ethical background material we had discussed, and then as a group-of-the-whole the students discussed possible responses to these issues using Davis' "Seven Step Guide" as a framework. The case study as used in this session is attached as "Massachusetts Wind Farm Ethics Case."

Session 3. During the third class session involving professional ethics material, we discussed a more complex version of the Cape Wind Case for the purpose of generating a template for the final written report. The template that was developed during this discussion included analyses *re* safety and public welfare, stakeholder responses based on competing values, and economic issues. These professional ethics related issues were grounded on the previous two professional ethics class sessions and students' work during them with the codes of ethics. The case study as used in this session is attached as "Final Report Template – Consideration of the Cape Wind Farm."

One of the major pieces of course work also specifically focused on ethical issues. The central premise of the course was that Clarkson University represents a microcosm of society-at-large, meaning that while studying energy issues at Clarkson students would also learn much that was applicable to energy issues in society. Students wrote an essay in which they evaluated this premise. (The essay assignment is attached as "HP210 Essay Topic, Fall 2002.") Virtually all of the papers drew a distinction between Clarkson and society-at-large with respect to the Clarkson community's shared sense of mission and social cohesiveness, and then on the basis of this distinction postulated that it would be easier for the Clarkson community to adopt a value like sustainability more readily than society-at-large. While none of the papers drew the analogy between this situation and the manner in which professional organizations take on ethical obligations that go above and beyond society's base morality, it may be that the discussion in the course of professional organizations and their codes of ethics "primed" students to discover this point.

I felt that the course achieved my objective with respect to professional ethics, namely, bringing it in as a minor theme in a way that related naturally to the major themes of the course. As I review the evaluations completed by the students, it appears that the majority of the students share this view.