1.133 M.Eng. Concepts of Engineering Practice Fall 2007

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY Department of Civil and Environmental Engineering 1.133 Concepts of Engineering Practice

Assignment 7

PROFESSIONAL ETHICS DEBATES ON CASE STUDIES

Presentation date: Lecture 19 Due: Slides and team report due 9pm, one day before Lecture 19

1. GENERAL

This exercise uses case studies developed by Professor Ronald Buckham, former Director of Professional Engineering Practice Liaison Program at the University of Washington, with his permission. The cases are now found at the National Institute of Engineering Ethics (http://www.niee.org). His explanation of the program (below) provides the motivation for considering applied ethics.

Program Incentive:

Society tends to hold practicing engineers, associated scientists, architects, and allied design professionals to high standards and expects them to perform on an ethical plane commensurate with their responsibility to the community. This expectation creates a dilemma for the university student and for the practicing design professional, since standards for ethical decision making are seldom addressed in professional training.

Program Objective:

While there is a wide spectrum of ethics theories available, and growing yearly, many are couched in terms which are difficult for the design professional to apply to the every day, sometimes gut-wrenching circumstances, encountered in professional practice. As a consequence, the focus of this program is to present real situations taken from professional practice in order to stimulate greater emphasis on ethical issues, and to hopefully allow our users an opportunity to avoid similar pitfalls in their own careers. The language used is straight-forward and the solutions provided for consideration are realistic, and, for the most part, practical. The expressed intent of this program is to foster discussion of ethical issues in professional practice and to derive practical solutions to ethical problems for practicing design professionals.

2. DEBATE ON ETHICS CASES

For this assignment, we will explore four case studies through an informal debate.

Tasks

The attachment to the Assignment consists of four case studies (see listed below). Each case study presents a practical ethical dilemma and several possible solutions. You will be assigned one of the four case studies. You will be required to pick one of the solutions, or devise a new or modified solution, and explain and

defend your solution through an ethically based argument. There is no right or wrong answer, so you will be judged on the quality of your argument. State your assumptions and develop a clear, logical argument using the ethics principles listed under "Recommended Core Ethical Values" as a guide. Pay particular attention to the "fidelity" values. You may use other ethical values in your argument.

Structure of Debate

The class will be divided into eight groups, two for each case study (groups A and B). The members of each group will work together to prepare a solution to their ethical dilemma, which they will present in class. **Each group should not reveal its solution to the other groups**. Preparation will include one or two slides summarizing the case study, and another two slides presenting the group's solution to the ethical problem. Each group can decide how many presenters to use. The groups in each case study will provide a point-counterpoint for their respective case.

For each case, we will flip a coin to determine which of the two groups (A or B) will kick off the presentation. The starting group will present a summary of the case (2 minutes). The second group will provide their solution to the problem (2 minutes). Finally the first group will give a critique of the second group's solution (agreeing, disagreeing, or a mix, and explaining why), at the end of which they will briefly state their solution (2 minutes). Following this, there will be a brief discussion period open to the whole class (3 minutes).

Everyone is responsible for being familiar with **all** of the case studies (i.e. please also read over the ones you are not presenting). Due to time constraint, we may cut off a team when the time is up. Please remember that the second group is providing a critique of the first group's argument, not simply presenting your own argument. Therefore, the first group should also use the second group's slides to structure their critique, rather than using their own.

3. GRADING

Teams will be graded based on their argument (50%) and their slides (25%). Members of each team will all receive the same grade, regardless of who presents or critiques during the presentation. Individual students will also be graded for class participation (25%). Questions and comments from the class, after each point and counterpoint presentation, will count toward your class participation grade.

Please email a copy of the slides (Powerpoint) and group report (Word document) to the instructor by 9pm, the night before Lecture 19.

Since there is no right answer, you will be graded on the strength and delivery of your ethical argument. Slides should be clear and simple (no extra points for fancy slides). Come prepared. Reading all the cases will not only make the class more enjoyable and educational, but also allow you to improve your class participation grade.

4. GROUP AND CASE ASSIGNMENT

You will be assigned to one of the four cases below.

Where the Green Grass Grows [Link over title to: http://74.125.45.104/search?q=cache:daFV-Z1DA0AJ:www.niee.org/Case_of_the_Month/1002-Where%2520the%2520Green%2520Grass%2520Grows.doc+where+the+green+grass+grows+ethics+case&hl=en&ct=clnk&cd=1&gl=us&client=firefox-a]

"Ethics Cases in Professional Practice: The Joy of Being Wanted." *Journal of Professional Issues in Engineering Education and Practice* 124, No. 2 (April 1998): 19-22.

The Fetid Favor Fiasco [Link over title to: http://74.125.45.104/search?q=cache:A3TtgiWUwxIJ:ecow.engr.wisc.edu/cgi-bin/get/epd/397/mcglamery/ethicsmate/1007-thefetidfavorfiasco.doc+fetid+favor+fiasco&hl=en&ct=clnk&cd=1&gl=us&client=firefox-a]

"To Flush or Not to Flush: That's the Question." *Journal of Professional Issues in Engineering Education and Practice* 124, No. 4 (October 1998): 94-96.