

University of Massachusetts Amherst

ScholarWorks@UMass Amherst

Ethics in Science and Engineering National
Clearinghouse

Science, Technology and Society Initiative

4-16-2007

Ethics Bowl Competition as Capstone Activity for Practical and Professional Ethics Classes

William J. Frey

University of Puerto Rico - Mayaguez

Jose A. Cruz-Cruz

University of Puerto Rico - Mayaguez

Follow this and additional works at: <https://scholarworks.umass.edu/esence>



Part of the [Engineering Commons](#), [Life Sciences Commons](#), [Medicine and Health Sciences Commons](#), [Physical Sciences and Mathematics Commons](#), and the [Social and Behavioral Sciences Commons](#)

Recommended Citation

Frey, William J. and Cruz-Cruz, Jose A., "Ethics Bowl Competition as Capstone Activity for Practical and Professional Ethics Classes" (2007). *Ethics in Science and Engineering National Clearinghouse*. 329. Retrieved from <https://scholarworks.umass.edu/esence/329>

This Online Course is brought to you for free and open access by the Science, Technology and Society Initiative at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Ethics in Science and Engineering National Clearinghouse by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

1. Emerging out of the IIT EAC Workshop
 1. [EAC Toolkit - UPRM Ethics Bowl - IIT Summer Institute Follow-up](#)
 2. [EAC Toolkit - Instructor Module for UPRM Ethics Bowl Activity](#)
2. Ethics Bowl in the Classroom
 1. [Ethics Bowl Rules and Procedures](#)
 2. [Ethics Bowl: Cases and Score Sheets](#)
 3. [Three Frameworks for Ethical Problem-Solving in Business and the Professions](#)
 4. [Ethical Leadership Using "Incident at Morales"](#)
3. Ethics Bowl Debriefing and Assessment
 1. [Practical and Professional Ethics Bowl Activity: Follow-Up In-Depth Case Analysis](#)
 2. [Ethics of Teamwork](#)
 3. [Rubrics for Exams and Group Projects in Ethics](#)
4. Adaptation of Ethics Bowl to Environments of the Organization
 1. [Ethics Bowl for Environments of the Organization](#)
 2. [Módulo para Instructores -- El Tazón de la Ética Para Ambientes de la Organización](#)
 3. [Ethics Bowl for Environments of the Organization-- Instructor Module \(Bilingual Version\)](#)

EAC Toolkit - UPRM Ethics Bowl - IIT Summer Institute Follow-up
This module describes and prepares students for the ethics bowl activity that is carried out in some of the professional ethics courses at the University of Puerto Rico – Mayaguez Campus. An earlier version of the activity is described in a report for the IIT EAC Summer Institute Workshop. This updated version is being developed through the NSF funded EAC Toolkit Project (SES-0551779).

MAIN CONTENT (MODULE / EXERCISE / CASE)

Module Introduction

The "Prerequisite link" included in the upper right-hand corner of this module opens the module content located at the IIT **Center for the Study of Ethics in the Professions**. This file, "Report on Ethics Integration Projects," was prepared by Dr. Jose Cruz-Cruz as the follow-up to a workshop he attended at the Illinois Institute of Technology on ethics across the curriculum. Directed by Michael Davis (Senior Fellow at the Center for the Study of Ethics in the Professions), the IIT EAC workshop was funded by the National Science Foundation.

Module Activities

1. Open the link to the IIT Ethics Bowl Packet
2. Read the section beginning on page 2, "The Ethics Bowl at UPR - Mayaguez"
3. Read the cases in the Appendix from page 8 to page 12.
4. Prepare a position paper on each case. Since the cases terminate at a decision point, make a decision and justify it in terms of reversibility, harm/beneficence, and publicity. Then carry out a global feasibility analysis. For more on the tests and a decision making framework consult the module, "Three Frameworks in Ethical Decision-Making." See link above.
5. Prepare for the Ethics Bowl debate by studying the procedures and scoring criteria presented in the report at IIT.

The Ethics Bowl can be divided into eight stages

1. Team 1 receives its case and gives an initial presentation taking an ethical position and providing an ethical justification.
2. Team 2 makes a commentary that critically analyzes Team 1's presentation.
3. Team 1 responds to Team 2's commentary.
4. Fifteen minutes are allotted for the judges in the peer review teams to ask Team 1 questions. After this, the judges/peer review teams score the first half of the competition without announcing the results.
5. Team 2 receives its case and makes an initial presentation in which it states and justifies its decision or position.
6. Team 1 gives a commentary to Team 2's presentation. They can take a counter-position as well as reveal weaknesses in Team 2's position and justification.
7. Team 2 responds to Team 1's commentary.
8. Team 2 answers questions from the judges for 15 minutes.

Media Files

Four Media Files open key documents for the Peer Reviewed Ethics Bowl held in Corporate Governance classes at UPRM. The first file provides a presentation that will help to orient you to the Ethics Bowl. The second and third files contain the score sheets which also serve as rubrics assessing your achievements in the debating criteria of **(1) Intelligibility, (2) Integrating Ethical Concerns, (3) Feasibility, and (4) Moral Imagination and Creativity**. The final Media File provides Ethics Bowl rules modified to fit the peer review format.

Ethics Bowl Presentation

<https://cnx.org/content/m14386/>

This presentation helps orient students and faculty on the Professional Ethics Bowl held at the University of Puerto Rico at Mayaguez

Team One Score Sheet

<https://cnx.org/content/m14386/>

Scoring sheet and rubric
for Team 1 in UPRM
Professional Ethics Bowl.

Revised Score Sheet Team Two

<https://cnx.org/content/m14386/>

This is the revised score
sheet and rubric for Team
2 in the UPRM
Professional Ethics bowl.

Rules and Procedures for Ethics Bowl at UPRM

<https://cnx.org/content/m14386/>

The attached document
briefly describes the
UPRM Ethics Bowl
competition in its current
Peer Review format.

SUPPLEMENTARY INFORMATION

Summary of Scoring Criteria

- **Intelligibility** includes three skills or abilities: (1) the ability to construct and compare multiple arguments representing multiple viewpoints; (2) the ability to construct arguments and provide reasons that are clear, coherent, and factually correct; (3) evidence of realizing the virtue of reasonableness by formulating and presenting value integrative solutions.

- **Integrating Ethical Concerns** includes three skills: (1) presenting positions that are clearly reversible between stakeholders; (2) identifying and weighing key consequences of positions considered; (3) developing positions that integrate values like integrity, responsibility, reasonableness, honesty, humility, and justice.
- **Feasibility** implies that the positions taken and the arguments formulated demonstrate full recognition and integration of interest, resource, and technical constraints. While solutions are designed with constraints in mind, these do not serve to trump ethical considerations.
- **Moral Imagination and Moral Creativity** demonstrate four skill sets: (1) ability to clearly formulate and frame ethical issues and problems; (2) ability to provide multiple framings of a given situation; (3) ability to identify and integrate conflicting stakeholders and stakes; (4) ability to generate solutions and positions that are non-obvious, i.e., go beyond what is given in the situation.

Learning Objectives

The learning objectives for this module conveniently divide into content areas and skills. The content objectives can be found in the AACSB ethics criteria of **ethical leadership, ethical decision-making, social responsibility, and corporate governance**. The skills objectives include the skills emphasized at the University of Puerto Rico at Mayaguez: **ethical awareness, ethical evaluation, ethical integration, ethical prevention, and value realization**. In addition, there are the criteria of moral creativity and moral imagination.

Content Objectives

- **Ethical Leadership:** You have examined ethical leadership by looking at the moral exemplars portrayed in the module of that name. What skills and virtues do moral exemplars exhibit? How do these skills and virtues "cluster"? What can you do to exhibit moral leadership? In making and defending your decisions in the Ethics Bowl, spend time showing the peer review teams how your decisions exhibit moral leadership.

- **Ethical Decision-Making:** We are using a decision making framework this semester that emphasizes four stages: (1) problem specification, (2) solution generation, (3) solution testing, (4) solution implementation. Spend time during the debate to show that you know what the problem is you are trying to solve. In preparing for the debate, you have carried out a brainstorming process to generate a solution list; you will be able to show evidence of this when you do your in-depth case analysis. Solution testing you carry out when you evaluate and rank alternatives in terms of their ethics. Try not to neglect the final stage where you show the feasibility of the solution you are advocating. Show that you have thought through implementation carefully, even to the extent of uncovering the most likely obstacles to your solution.
- **Social Responsibility:** The Socio-Technical System grids we have worked on in class will help to uncover issues of social responsibility in the cases for the Ethics Bowl. Social responsibility requires that you step back from your decision point to look at the broader social and political implications of what you are doing.
- **Corporate Governance:** Many of you will quickly determine that the participant perspectives from which you are asked to make your decisions are tightly constrained by organizational problems. Companies that discourage communication, seek to pass blame down to those low on the hierarchy, and pressure employees to take legal and ethical short cuts bear much of the blame for creating the ethical problems you are required to solve. But stay focused on your agent's perspective. Formulate concrete strategies for leading organizational change from that perspective. You can talk about changing the organizational culture. Solving the problem may require reforming the "system." But do not fall into the trap of blaming the system.

Skill Objectives

- **Ethical Awareness:** You will demonstrate ethical awareness by how well you identify and frame the ethical issues and problem that arise in the case you debate. If you spend time in your presentation framing the problem raised in your case and making sure the peer review team understands how you see the problem, you will do well in this

category. A helpful hint: many of the cases you will be debating can be sharply specified as value conflict problems. Show the values that are in conflict and how you will go about integrating them.

- **Ethical Evaluation:** You have already spent time practicing ethical evaluation by using the ethics tests to assess and rank solution alternatives in the Hughes case. The tests help you to hone in on the ethical strengths and weakness of solution alternatives. When the tests converge on a solution, this is a strong sign of its ethical strength. When they diverge, this signals to you the need to reformulate the solution to cover the "ethics gaps" raised by the tests.
- **Ethical Integration:** You have examined the analogy between design and ethics problems. In ethics problems, we create solutions that realize, balance, and integrate the ethical specifications. We also implement these solutions over situational constraints like resource, interest, and technical constraints. Ethical Integration requires that you make clear the solution formulation process that your solution demonstrates. Make it crystal clear to the peer review teams that you have designed your solution to realize ethical considerations while respecting situational constraints.
- **Ethical Prevention:** This is not the prevention of the ethical but the anticipation of potential problems and the development of counter-measures to prevent these problems from arising or to minimize their impact. The earlier we address ethical problems the easier they are to solve. Taking a preventive stance toward ethical problems is the best way to promote ethics in the real world.
- **Value Realization:** Finally, make the move from asking how to fix things when they go wrong to how to make things continually better. As professionals, you are in the position to use your knowledge and skills to realize values of all types. Now you can put this to work to identify ethical value "gaps" and develop strategies for eliminating them.

A quick word on two additional objectives. Moral imagination requires examining a situation from multiple framings. As we have already seen in class, some of you approach problems from a social perspective. You see effective solutions lying in leading opposition, forming coalitions among co-workers, and leading organizational charges to resolve injustices. But

others seek to formulate problems in technical terms. Changing the manufacturing process, pressing for technically innovative designs, and formulating situations as technical puzzles. The point here is that the one does not exclude the other, and moral imagination requires working through these and other possible framings.

As we have seen in the reversibility test, moral imagination also requires projecting ourselves into the positions of others and viewing the situation from their standpoint. This does not require abandoning ourselves to this perspective, especially when there are moral problems with doing so. But showing during the course of the debate that you have taken time to explore the situation from the standpoint of the different stakeholders, that you have taken the time to listen to and understand the objections of the other team, and that you have carefully considered the issues raised by the peer review teams is the best way to show moral imagination in the Ethics Bowl.

Moral creativity requires showing that you have taken the effort to design non-obvious solutions to the problems at hand. Going beyond the obvious requires re-framing so moral creativity requires moral imagination. But moral creativity also requires exercise of the virtue of reasonableness. If you are confronted with a solution where values are in conflict, have you considered creative, out-of-the-box methods for integrating them? When one way of framing the problem and the situation fails to produce helpful answers, have you tried reformulating the problem? If you cannot solve the entire problem, have you tried solving a part and setting the rest aside for a more productive time? Moral creativity requires demonstration of out-of-the-box thinking on how to solve moral problems.

Additional Activities

Activities Before and After the Ethics Bowl

- Work with and practice your ethical approaches, ethics tests, and other frameworks. They will help structure your presentation, responses to the other teams, and answers to the peer review judges' questions.

- Prepare your cases. This requires developing a format or template that makes it possible for one person to specialize on the case but facilitates disseminating the case to the rest of the team. Solution evaluation matrices help. So do concise problem statements.
- After the Ethics Bowl you will be asked to do an in-depth analysis of the case you debated during the competition. You will find a format for this analysis in the Engineering Ethics Bowl: Follow-up In-Depth Case Analysis module, m13759.
- Finally, what did you learn while working together as a team? What kind of cooperative problems developed? How did you solve them? Did they correspond to the problems raised by the "Ethics of Team Work" module or were they different? In fact, go back over that module and see how well it prepared you for the issues that arose as you interacted with your team.

Alternate or optional activities related to this EAC module.

Assessment

Uploaded below are suggested or optional assessment activities for students to carry out.

Muddiest Point Assessment Activity

<https://cnx.org/content/m14386/>

This assessment activity provides a global of the strongest and weakest points of the Professional Ethics Bowl.

Module Assessment Form

<https://cnx.org/content/m14386/>

This assessment form has been adapted from one

disseminated by Michael
Davis in the Illinois
Institute of Technology
Ethics Across the
Curriculum Workshops. It
provides a global
assessment of a given
module.

Assessment and Scoring Tips to Peer Review Teams (Under Construction)

Module-Background Information

Information about the source or history of this module that may be interesting for students or instructors.

[The Ethics Bowl](#) This link will take you to the official home of the Intercollegiate Ethics Bowl. It appears as a part of the web page of the Center for the Study of Ethics in the Professions at the Illinois Institute of Technology.

Appendix

Under construction

- Additional Background Knowledge
- Contextual Setting
- Relevant Ethical Theories and Frameworks
- Technical Background Information
- Discipline Specific Information
- References or links to related information
- Etc.

EAC Toolkit - Instructor Module for UPRM Ethics Bowl Activity

REFERENCE OR LINK TO STUDENT MODULE

This Ethics Bowl Instructor Module corresponds to the student module, **EAC Toolkit - UPRM Ethics Bowl - IIT Summer Institute Follow-up** (see pre-requisite link on the right). The student module is part of the Corporate Governance course published in Connexions (col10396). First implemented as a capstone activity for engineering ethics classes (at the suggestion of Robert Ladenson of IIT who originated the Intercollegiate Ethics Bowl held at the annual meetings of the Association for Practical and Professional Ethics), this activity was reported on in its initial stages by Dr. Jose Cruz during an NSF-funded workshop on Ethics Across the Curriculum led by Michael Davis and carried out at the Illinois Institute of Technology in 2003. Since then, the activity has undergone several revisions. This module and the student module link to Dr. Cruz's report. But they also include material added and revised since this report. By collecting this material in the student and instructor modules, readers can see how the competition has evolved as well as learn how it can be adapted to different learning situations.

INSTRUCTOR RESOURCES (Sharing Best Practices in EAC!)

This section contains information related to the above referenced Student Module. The intent and expectation is that the information contained in this section will evolve over time based on the experiences and collaborations of the authors and users of the Student Module and this Instructor Module. For example, the authors, collaborators or users can provide the following kind of information (mainly directed at or intended for instructors).

Module-Background Information

Where did this module come from? (e.g. A workshop, news story, based on a movie, etc.) What condition is it in? (e.g. first draft, needs editing, publishable, etc.) How has it been used in the past? (e.g. in classroom, workshop activity, ethics debate, etc.) Other relevant or interesting details

Robert Ladenson describes the growth of the Ethics Bowl concept in his paper, "The Educational Significance of the Ethics Bowl. Currently, he directs an Intercollegiate Ethics Bowl consisting of regional competitions and a national competition held annually at the meetings of the Association for Practical and Professional Ethics. The ICEB has over the years developed prestige and stature including winning the American Philosophical Association prize for Excellence and Innovation in Philosophy Programs.

The Puerto Rican instantiation of the competition in Engineering and Corporate Governance classes represents something of a de-evolution of the concept. Ladenson began the competition within his school, the Illinois Institute of Technology; then it grew into its present form. At UPRM, we have brought the competition back into the classroom where it serves as the capstone activity for classes in Practical and Professional Ethics. With the minimal modifications we have made, it has turned into a very powerful classroom tool for teaching different aspects of Practical and Professional Ethics.

This particular version of the Ethics Bowl has gone through four stages.

- First, judges from Humanities and Engineering were invited to the class, and, on a Monday-Wednesday-Friday schedule within the confines of a 50 minute class, the entire competition took place and scores were calculated and announced. Each student team debated twice. But assessment results showed that students wanted more time to carry out each stage of the competition and they wanted more feedback from the judges.
- For this reason, the second phase of the competition was carried out during the longer class sessions of the Tuesday-Thursday schedule. While students had more time to formulate their arguments and

responses, they still asked for a more relaxed schedule that included more feedback from the judges.

- In the third phase, the debates were held outside the regular class schedule as determined by the students, usually on Saturdays and holidays. While this generally worked well for the students, it became difficult to find engineering and humanities faculty members willing to give up 6 to 8 hours of their weekend.
- In the fourth phase, two student debating teams compete during the regular Monday-Wednesday-Friday schedule. The first team defends its case in the first class period. The second receives and discusses its case in the following class period. Along with the two debating teams, two peer review teams serve as judges asking questions during the questioning period and scoring at the end of each class period. Finally, a third class period is given over to the peer review teams announcing and explaining their scoring. The advantage of this version of the competition is it solves both the time and feedback concerns that persisted through the prior instantiations of the debate.

The authors of this module have discussed issues concerning the integration of the Ethics Bowl into the classroom in a paper entitled, "The Ethics Bowl in Engineering Ethics at the University of Puerto Rico - Mayaguez. (Teaching Ethics, 4(2), Spring 2004: 15-32.) This paper discusses the assessment methodology used and summaries of the assessments of the first two years of the competition. After itemizing what the authors believe are the considerable accomplishments of the classroom activity, it goes on to mention several ethics bowl challenges. Ethics bowl assessment has continued after the publication of this article. Two particular challenges have emerged: clarifying as much as possible the judging criteria and providing the debating teams as much constructive feedback as possible. This instructor module and the corresponding student module describe ethics bowl innovations that attempt to respond to these assessment issues.

An article by Michael Davis, "Five Kinds of Ethics Across the Curriculum: An Introduction to Four Experiments with One Kind", discusses this classroom use of the Ethics Bowl as an instance of "professional ethics across the curriculum." In a footnote worth quoting, Davis distinguishes the Engineering Ethics Bowl held at UPRM from the Intercollegiate Ethics

Bowl that has come to form a central part of the yearly APPE meetings: "This description of the ethics bowl differs from Robert F. Ladenson, "The Educational Significance of the Ethics Bowl," Teaching Ethics 1(1) March 2001: 63-78, in at least three ways. First, it describes the process of transplanting the ethics bowl to a more or less non-English speaking environment. Second, it it describes an effort to use the ethics bowl for professional ethics across the engineering curriculum (rather than, as Ladenson presents it, use it to do social issues across the curriculum). And third, it it describes the process of making the ethics bowl fit the time-constraints of an ordinary (engineering) classroom."

We add three further distinctions to Davis'.

- First, we have sought to use the ethics bowl as a way to generate feedback for students on their skills in ethical decision-making. Three classes are devoted to each competition. The third class provides an effective debriefing on the competition. It is not always easy for students to receive such feedback, but debriefing activities help them to interpret feedback and put it to good use.
- The ethics bowl provides an excellent opportunity for students to refine their understanding of what Rest terms "intermediate moral concepts." Examples of these concepts include "paternalism", "conflict of interest", "faithful agency", "public wellbeing", and "collegiality". By choosing cases that explore the boundaries of these concepts, the ethics bowl can be used as a way of proceeding from clear instances of these concepts to more problematic instances. This activity of prototyping forms an essential part of our coming to understand the thick, complicated moral concepts so essential to everyday moral reasoning.
- Studies like the Hitachi Report demonstrate that much of the moral decision-making that our students will be exercising will be shaped and constrained by the organizational environments in which they work. Companies built around financial objectives elicit one kind of moral advocacy while those built around customer- or quality-oriented standards require quite different strategies. With carefully chosen cases, the ethics bowl can recreate these environments to allow students to practice decision-making under real world constraints. The classroom becomes an "ethics laboratory".

Learning Objectives

What are the intended learning objectives or goals for this module? What other goals or learning objectives are possible?

Below are different lists of content and skill objectives of the ethics bowl. Not all of them apply at once. But they can be bundled together to fit different forms or instantiations. For example, a Corporate Governance ethics bowl would differ from an Engineering Ethics Bowl in terms of content objectives. This difference could be reflected in case selection, especially through the different basic and intermediate moral concepts covered by a case. The same would apply to a list of skill objectives; not all the UPRM skills could be covered in a given case or even a given competition. But a wide range of cases selected for student preparation could at least touch upon these skills.

Content Objectives come from the AACSB Ethics Education Task Force Report. In the Corporate Governance class (Connexions course, col10396), a special effort has been made to make the ethics bowl responsive to these content requirements.

Content Objectives

- **Ethical Leadership (EL):** (a) “Expanding...awareness to include multiple stakeholder interests and...developing and applying...ethical decision-making skills to organizational decisions in ways that are transparent to...followers.” (b) “Executives become moral managers by recognizing and accepting their responsibility for acting as ethical role models.”
- **Decision-Making (DM):** “Business schools typically teach multiple frameworks for improving students’ ethical decision-making skills. Students are encouraged to consider multiple stakeholders and to assess and evaluate using different lenses and enlarged perspectives.”
- **Social Responsibility (SR):** “Businesses cannot thrive in environments where societal elements such as education, public health, peace and personal security, fidelity to the rule of law, enforcement of contracts, and physical infrastructures are deficient.”
- **Corporate Governance (CG):** (a) “Knowing the principles and practices of sound, responsible corporate governance can also be an

important deterrent to unethical behavior.” (b) “Understanding the complex interdependencies between corporate governance and other institutions, such as stock exchanges and regulatory bodies, can be an important factor in managing risk and reputation.”

UPRM Ethical Empowerment Skills List

- UPRM Objectives have been taken from SEE, 546-547:
- **Ethical Awareness:** “the ability to perceive ethical issues embedded in complex, concrete situations. It requires the exercise of moral imagination which is developed through discussing cases that arise in the real world and in literature.”
- **Ethical Evaluation:** “ the ability to assess a product or process in terms of different ethical approaches such as utilitarianism, rights theory, deontology, and virtue ethics.” This skill can also be demonstrated by ranking solution alternatives using ethics tests which partially encapsulate ethical theory such as reversibility, harm, and publicity.
- **Ethical Integration:** “the ability to integrate—not just apply—ethical considerations into an activity (such as a decision, product or process) so that ethics plays an essential, constitutive role in the final results.”
- **Ethical Prevention:** the ability to (a) uncover potential ethical and social problems latent in a socio-technical system and (b) develop effective counter-measures to prevent these latent problems from materializing or to minimize their harmful or negative impact. Ethical is an adjective that modified “prevention”; hence ethical prevention does not mean the prevention of the ethical.
- **Value Realization:** “the ability to recognize and exploit opportunities for using skills and talents to promote community welfare, enhance safety and health, improve the quality of the environment, and (in general) enhance wellbeing.

Hastings Center Goals

- Stimulate the moral imagination of students
- Help students recognize moral issues
- Help students analyze key moral concepts and principles
- Elicit from students a sense of responsibility

- Help students to accept the likelihood of ambiguity and disagreement on moral matters, while at the same time attempting to strive for clarity and agreement insofar as it is reasonably attainable
- (from Pritchard, Reasonable Children, 15)

Goals for ethical education in science and engineering derived from psychological literature (Huff and Frey)

- Mastering a knowledge of basic facts and understanding and applying basic and intermediate ethical concepts.
- Practicing moral imagination (taking the perspective of the other, generating non-obvious solutions to moral problems under situational constraints, and setting up multiple framings of a situation)
- Learning moral sensitivity
- Encouraging adoption of professional standards into the professional self-concept
- Building ethical community

The figure below provides an EAC Matrix used at the University of Puerto Rico at Mayaguez in the College of Business Administration. It also separates the objectives mentioned above into primary and secondary areas of focus. Finally, it imports information as to whether the actual outcomes meet the objectives.

Ethics Bowl Student Module Matrix

<https://cnx.org/content/m14387/>

This Matrix identifies the learning objectives of the corresponding student module by cross referencing the moral development objectives, accreditation criteria and the curricular "space" the module fills.

Instructional / Pedagogical Strategies

Which pedagogical or instructional strategies are used or suggested for this module. (For example: Discussion/Debate, Decision-Making Exercise, Presentation, Dramatization or Role Playing, Group Task, Formal or Informal Writing, Readings, among others)

This module employs the following pedagogical strategies:

- **Informal Writing:** Students prepare their cases by writing short summaries.
- **Formal Writing:** After ethics bowl competition, students in teams prepare a formal, in-depth case analysis of the case they debated during the competition.
- **Cooperative Learning:** Students are divided into teams to prepare for debate, carry out debate, peer review as judges other debates, and prepare an in-depth follow-up analysis. They also prepare preliminary and final self-evaluations to assess the effectiveness of their work together as teams.
- **Pre-Debate Skills:** The ethics bowl requires considerable preparation. Students need practice with ethical and practical frameworks as well as work on researching cases and working with the basic and intermediate moral concepts posed in the cases. Students also need an orientation to the competition that includes the rules, time line, and debating and presenting strategies. Finally, it is important to explain carefully to students the ethics bowl scoring criteria.

Assessment / Assurance of Learning

What assessment or assurance of learning methods are used or suggested for this module? (For example: 1-minute paper, Muddiest Point, Quiz/Test Items, Oral Presentation, Student Feed-back, among others). What did or didn't work?

The figures below provide handouts for assessing this module. The Ethics Bowl scoring sheets contained in the Student Module also provide excellent means for assessing this activity.

Muddiest Point Assessment Form

<https://cnx.org/content/m14387/>

The attached word document provides a handout to assess this module in terms of its weakest and strongest points.

Module Assessment Form

<https://cnx.org/content/m14387/>

This figure contains an assessment handout, a modification of a form developed by Michael Davis for IIT EAC workshops.

Pedagogical Commentary

Any comments or questions regarding this module? (For example: suggestions to authors, suggestions to instructors (how-to), queries or comments directed to EAC community, pitfalls or frustrations, novel ideas/approaches/uses, etc.)

- Case selection is everything. Identify the moral concepts you wish to cover. Then choose cases that involve these concepts. The debate itself, especially the question and answer session with the judges, can be used to generate a discussion of these concepts.
- The Ethics Bowl is definitely a student-centered activity. It is best for the teacher to assume the role of moderator and intervene only to keep

the discussion focused. If students are properly oriented for the competition, then they assume responsibility themselves for keeping the debate orderly.

- Debriefing is important. Students get plenty of feedback from the competition and need help interpreting it and receiving it constructively. The peer review students also need advice on how to deliver the feedback proactively. We tend to approach the debate from the standpoint of the virtue of reasonableness and provide students with plenty of opportunities to practice this virtue before the competition.

Appendix (Annotated)

Bibliographical Information

- Robert F. Ladenson (2001) "The Educational Significance of the Ethics Bowl". *Teaching Ethics* 1(1), March 2001: 63-78.
- Jose A Cruz, William J. Frey, and Halley D. Sanchez. (2004) "The Ethics Bowl in Engineering Ethics at the University of Puerto Rico-Mayaguez". *Teaching Ethics* 4(2), Spring 2004: 15-32.
- Michael Davis (2004) "Five Kinds of Ethics Across the Curriculum". *Teaching Ethics* 4(2), Spring 2004: 1-14.
- Michael Davis (1998) *Thinking Like An Engineer: Studies in the Ethics of a Profession*. U.K.: Oxford University Press: 119-156.
- Michael S. Pritchard (1996) *Reasonable Children: Moral Education and Moral Learning*. Lawrence, KS: University of Kansas Press: 140-163
- James Rest, Darcia Narvaez, Muriel J. Bebeau, and Stephen J. Thoma (1999) *Postconventional Moral Thinking: A Neo-Kohlbergian Approach*. Mahway, New Jersey: Lawrence Erlbaum Associates, Publishers: 104.
- Mark Johnson (1993) *Moral Imagination: Implications of Cognitive Science for Ethics*. Chicago, IL: University of Chicago Press: 8-9.
- Jose A Cruz and William J. Frey (2003) "An Effective Strategy for Integrating Ethics Across the Curriculum in Engineering: An ABET 2000 Challenge" *Science and Engineering Ethics* 9(4): 546-548.

- Chuck Huff and William Frey (2005) Moral pedagogy and Practical Ethics, *Science and Engineering Ethics*, 11(3): 389-408.

Additional information or annotations for instructors regarding the Student Module Appendix

Ethics Bowl Rules and Procedures

This media file describes the rules and procedures for the UPRM version of the ethics bowl competition. Included is a timeline for the competition and a rubric that identifies the four scoring categories. Both have been adopted from the national ethics bowl competition developed by Robert Ladenson and held yearly at the meetings of the Association for Practical and Professional Ethics.

Downloadable MS Word File

<https://cnx.org/content/m13817/>

Ethics Bowl Rules and
Procedures.

This media file has a powerpoint presentation delivered by Jose Cruz, Halley Sanchez, and William Frey at the 2004 meeting of the Association for Practical and Professional Ethics. The presentation describes activities that help prepare students for the competition, shows how the cases used in the competition are selected, breaks down the competition into its constituent parts, and describes how students are debriefed after the competition. The activities used to prepare students for the competition are crucial; they provide opportunities to practice skills in moral imagination. Debriefing activities are equally important since students frequently fail to see how they have developed skills in preparing for and participating in the competition.

Ethics Bowl at UPRM

<https://cnx.org/content/m13817/>

This figure describes
preparatory activities,
debate structure, and
debriefing exercises for an
adaption of the Ethics
Bowl held in Engineering
Ethics classes at the

University of Puerto Rico
at Mayaguez. It was
presented at APPE in
2004.

Ethics Bowl: Cases and Score Sheets

Module Introduction

This module is designed to give you a brief orientation in the Ethics Bowl competition. It is designed to compliment and complete other modules concerning the ethics bowl that you will find in the Corporate Governance course.

Ethics Bowl Rules (briefly)

- The moderator will begin the competition by flipping a coin to determine which team will present first. If the team that calls wins the toss, they choose whether they or the other team go first.
- Monday: (1) Team 1 will have one minute to consult and seven minutes to give its initial presentation. The presentation must be tied to the question/task given to it by the moderator. (2) Team 2 has a minute to consult and seven minutes to make its Commentary on Team 1's presentation. Team 2 can close its commentary by posing a question to Team 1. (3) Team 1 then has a minute to consult and five minutes to respond to Team 2's Commentary. (4) Team 1 will then answer questions posed by the two peer review teams. Each peer review team will ask a question. A quick follow-up is allowed. The peer review question and answer session will go for 15 minutes. (5) The peer review teams will score the first half of the competition but not announce the results.
- Wednesday: The same procedure will occur while reversing the roles between Teams 1 and 2. Thus, team 2 will present, team 1 comment, team 2 respond, and then team 2 will answer questions from the peer review panels. The peer review panels will add the scores for the second part of the competition but will hold off on announcing the results until Friday's class.
- Friday: The two peer review teams will present and explain their scores. Peer Review teams will take note: you're objective is not to criticize or evaluate the debating teams but to provide them feedback in terms of the four categories.

- Debating teams may trade minutes from consulting to presenting. For example, Team 1 may decide to take two minutes to consult when given their case and task. This means that they will have 6 minutes, instead of 7, to present.
- Nota Bene: Debating teams and Peer Review teams are not allowed to bring notes into the competition. You will be provided with paper to take notes once the competition starts.
- Even though the national Ethics Bowl competition allows only one presenter, debating teams will be allowed to "pass the baton." When one person finishes speaking, another can step in his or her place. It is absolutely forbidden that more than one person speak at a time. Also, the competing team's speaking time is limited to its commentary. Once that is over, they are instructed to quietly listen. Infractions will be followed first by a warning. Second infractions will result in points being taken away.

Competition Time Line

1. Team 1 Presentation: One minute to consult, seven minutes to present.
2. Team 2 Commentary: One minute to consult, seven minutes to present.
3. Team 1 Response to Commentary: One minute to consult, five minutes to respond.
4. The question and answer session between Team 1 and the Peer Review teams will last 15 minutes (running clock). The first peer review team will have 7 minutes 30 seconds for its questions and the second will have roughly the same time.
5. In the second round, the time line is the same while the debating teams change roles.

Advice to Debating Teams

- Tell us what you are going to do, do it, and then tell us what you have done. In other words, start your presentation with a summary, then launch into the main body of your presentation, and then conclude with another summary. This will help the listening audience understand what you are trying to do.

- Be professional, formal, and courteous. Address yourself to the other team and the peer review team. It is a good idea to stand when you are giving your initial presentation.
- Be sure to communicate your understanding of the scoring criteria. What do you and your team understand by intelligibility, ethical integration, feasibility, and moral imagination/creativity? Take time to listen to the other team and the peer review teams to gain insights into their understanding. During the commentary and the question and answer session you will get crucial clues into what others think you have achieved and where you need further work. Use this feedback.
- Be sure to thank the peer review teams, moderators, and your opponents during and after the competition. Such formalities make it possible to penetrate to the deeper practices that underlie the virtue of reasonableness.
- Relax and have fun! You may not have the opportunity to say everything you want to say. One of the purposes behind this competition is to help you see just how hard it is to advocate for ethical positions. We almost always have to do so under serious constraints such as time limits. Also, remember that you have other forums for "getting it said," namely, your group self evaluation and your in-depth case analysis. In these places you will be able to discuss these issues in the kind of depth you think necessary.

Advice to the Peer Review Teams on Scoring

- Remember that all three scoring events of the competition are worth 20 points. The initial presentation, the response to the commentary and questions, and the commentary on the other team's presentation all count for the same 20 points.
- Although you have the complete rubric only for the initial presentation, you will score the other parts of the presentation based on the four criteria: intelligibility, ethical integration, feasibility and moral imagination/creativity. You will score 1 to 5 on each criteria for a total of 20.
- Three is the middle of the road score. In other words, three is a good, average score. It is not a C--don't think of scoring as grading. Start each team off from a default of three. Then move off that default only

when something exceptionally good or not so good happens. If your scores deviate much from straight twelves (36), then you are scoring too high or too low.

Ethics Bowl Scoring Criteria

1. **Intelligibility** includes three skills or abilities: (1) the ability to construct and compare multiple arguments representing multiple viewpoints; (2) the ability to construct arguments and provide reasons that are clear, coherent, and factually correct; (3) evidence of realizing the virtue of reasonableness by formulating and presenting value integrative solutions?
2. **Integrating Ethical Concerns** includes three skills: (1) presenting positions that are clearly reversible between stakeholders; (2) identifying and weighing key consequences of positions considered; (3) developing positions that integrate values like integrity, responsibility, reasonableness, honesty, humility, and justice.
3. **Feasibility** implies that the positions taken and the arguments formulated demonstrate full recognition and integration of interest, resource, and technical constraints. While solutions are designed with constraints in mind, these do not serve to trump ethical considerations.
4. **Moral Imagination and Creativity** demonstrate four skill sets: (1) ability to clearly formulate and frame ethical issues and problems; (2) ability to provide multiple framings of a given situation; (3) ability to identify and integrate conflicting stakeholders and stakes; (4) ability to generate solutions and positions that are non-obvious, i.e., go beyond what is given in the situation.

Peer Review Team Responsibilities

- Attend the debate sessions and the feedback session on Friday after the competition. Remember this is the capstone event of the course. It looks bad if you do not bother to attend.
- Your team will ask questions during the debate. This will constitute, at a minimum, one question and a quick follow up if necessary. You are not to debate with the presenting team. So your questions should not

be designed to trap them. Rather, seek through your questions to explore seeming weak points, unclear statements, and incomplete thoughts. Use your questions to help you line up the debating team against the four criteria.

- Fill out the score sheet and assess the debating teams in terms of intelligibility, integrating ethics, feasibility and moral imagination/creativity.
- Lead, with the other Peer Review team, the feedback sessions. This requires that you prepare a short, informal presentation that shows your scoring and then explains it.
- Always, always, always be courteous in your feedback comments. Try to present things positively and proactively. This is difficult but practice now will serve you well later when you are trying to explain to a supervisor how he or she has made a mistake.

Media Files with Cases and Score Sheets

Engineering Ethics Bowl

<https://cnx.org/content/m13852/>

Score Sheet Team One.

Engineering Ethics Bowl

<https://cnx.org/content/m13852/>

Score Sheet Team Two.

Ethics Bowl Cases

<https://cnx.org/content/m13852/>

Click here to open the word file containing the 12 Ethics Bowl classes for Business Ethics Spring 2007.

Ethics Bowl Cases for Fall 2007

<https://cnx.org/content/m13852/>

These are the cases for the Ethics Bowl Competition for the Fall Semester in the year 2007. These scenarios or decision points are taken from Incident at Morales, Hughes Aircraft Case, Biomatrix Case, and Toysmart Case.

Debriefing for Ethics Bowl, Round Two

<https://cnx.org/content/m13852/>

This presentation was given Friday, April 27 to the Ethics Bowl teams that debated on the Therac-25 case and the Inkjet case.

Three Frameworks for Ethical Problem-Solving in Business and the Professions

This module provides three frameworks that are essential to problem-solving in professional and occupational contexts. The first framework structures problem-solving by identifying four stages: **problem specification, solution generation, solution testing, and solution implementation**. The second framework zeros in on the solution testing phase and offers three means of testing and ranking solution alternatives in terms of their ethics. It consists of reversibility, harm, and publicity tests. The third framework consists of a feasibility test designed to identify obstacles to implementing solutions that arise from situational constraints like resource, interest, and technical limitations. These frameworks are abbreviated from materials that will eventually be published in *Good Computing: A Virtue Approach to Computer Ethics* that is being authored by Chuck Huff, William Frey, and Jose Cruz-Cruz. They can also be supplemented by consulting www.computingcases.org and *Engineering Ethics: Concepts and Cases* by Rabins, Harris, and Pritchard. This module has been developed as a part of an NSF-funded project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

Module Introduction

In this module you will learn and practice three frameworks designed to integrate ethics into decision making in the areas of practical and occupational ethics. The first framework divides the decision making process into four stages: **problem specification, solution generation, solution testing, and solution implementation**. It is based on an **analogy between ethics and design problems** that is detailed in a table presented below. The second framework focuses on the process of **testing solution alternatives for their ethics** by deploying three ethics tests that will help you to evaluate and rank alternative courses of action. The reversibility, harm, and publicity tests each "encapsulate" or summarize an important ethical theory. Finally, a **feasibility test** will help you to uncover interest, resource, and technical constraints that will affect and possibly impede the realization of your solution or decision. Taken together, these three frameworks will help steer you toward designing and implementing ethical solutions to problems in the professional and occupational areas.

Two online resources provide more extensive background information. The first, www.computingcases.org, provides background information on the ethics tests, socio-technical analysis, and intermediate moral concepts. The second, <http://onlineethics.org/essays/education/teaching.html>, explores in more detail the analogy between ethics and design problems. Much of this information will be published in *Good Computing: A Virtue Approach to Computer Ethics*, a textbook of cases and decision making techniques in computer ethics that is being authored by Chuck Huff, William Frey, and Jose A. Cruz-Cruz.

Problem-Solving or Decision-Making Framework: Analogy between ethics and design

Traditionally, problem-solving frameworks in professional and occupational ethics have been taken from rational decision procedures used in economics. While these are useful, they lead one to think that ethical decisions are already "out there" waiting to be discovered. In contrast, taking a design approach to ethical decision making emphasizes that ethical decisions must be created, not discovered. This, in turn, emphasizes the importance of moral imagination and moral creativity. Carolyn Whitbeck in *Ethics in Engineering Practice and Research* describes this aspect of ethical decision making through the analogy she draws between ethics and design problems in chapter one. Here she rejects the idea that ethical problems are **multiple choice problems**. We solve ethical problems not by choosing between ready made solutions given with the situation; rather we use our moral creativity and moral imagination to design these solutions. Chuck Huff builds on this by modifying the design method used in software engineering so that it can help structure the process of framing ethical situations and creating actions to bring these situations to a successful and ethical conclusion. The key points in the analogy between ethical and design problems are summarized in the table presented just below.

Analogy between design and ethics problem-solving	
Design Problem	Ethical Problem
Construct a prototype that optimizes (or satisfies) designated specifications	Construct a solution that integrates and realizes ethical values (justice, responsibility, reasonableness, respect, and safety)
Resolve conflicts between different specifications by means of integration	Resolve conflicts between values (moral vs. moral or moral vs. non-moral) by integration
Test prototype over the different specifications	Test solution over different ethical considerations encapsulated in ethics tests
Implement tested design over background constraints	Implement ethically tested solution over resource, interest, and technical constraints

Software Development Cycle: Four Stages

(1) problem specification, (2) solution generation, (3) solution testing, and (4) solution implementation.

Problem specification

Problem specification involves exercising moral imagination to specify the socio-technical system (including the stakeholders) that will influence and will be influenced by the decision we are about to make. Stating the problem clearly and concisely is essential to design problems; getting the problem right helps structure and channel the process of designing and implementing the solution. There is no algorithm available to crank out effective problem specification. Instead, we offer a series of guidelines or rules of thumb to get you started in a process that is accomplished by the skillful exercise of moral imagination.

For a broader problem framing model see Harris, Pritchard, and Rabins, **Engineering Ethics: Concepts and Cases**, 2nd Edition, Belmont, CA: Wadsworth, 2000, pp. 30-56. See also Cynthia Brincat and Victoria Wike, **Morality and Professional Life: Values at Work**, New Jersey: Prentice Hall, 1999.

Different Ways of Specifying the Problem

- Many problems can be specified as disagreements. For example, you disagree with your supervisor over the safety of the manufacturing environment. Disagreements over facts can be resolved by gathering more information. Disagreements over concepts (you and your supervisor have different ideas of what safety means) require working toward a common definition.
- Other problems involve conflicting values. You advocate installing pollution control technology because you value environmental quality and safety. Your supervisor resists this course of action because she values maintaining a solid profit margin. This is a conflict between a moral value (safety and environmental quality) and a nonmoral value (solid profits). Moral values can also conflict with one another in a given situation. Using John Doe lawsuits to force Internet Service Providers to reveal the real identities of defamers certainly protects the privacy and reputations of potential targets of defamation. But it also places restrictions on legitimate free speech by making it possible for powerful wrongdoers to intimidate those who would publicize their wrongdoing. Here the moral values of privacy and free speech are in conflict. Value conflicts can be addressed by harmonizing the conflicting values, compromising on conflicting values by partially realizing them, or setting one value aside while realizing the other (=value trade offs).

- If you specify your problem as a disagreement, you need to describe the facts or concepts about which there is disagreement.
- If you specify your problem as a conflict, you need to describe the values that conflict in the situation.
- One useful way of specifying a problem is to carry out a stakeholder analysis. A stakeholder is any group or individual that has a vital interest at risk in the situation. Stakeholder interests frequently come into conflict and solving these conflicts requires developing strategies to reconcile and realize the conflicting stakes.
- Another way of identifying and specifying problems is to carry out a socio-technical analysis. Socio-technical systems (STS) embody values. Problems can be anticipated and prevented by specifying possible value conflicts. Integrating a new technology, procedure, or policy into a socio-technical system can create three kinds of problem. (1) Conflict between values in the technology and those in the STS. For example, when an attempt is made to integrate an information system into the STS of a small business, the values present in an information system can conflict with those in the socio-technical system. (Workers may feel that the new information system invades their privacy.) (2) Amplification of existing value conflicts in the STS. The introduction of a new technology may magnify an existing value conflict. Digitalizing textbooks may undermine copyrights because digital media is easy to copy and disseminate on the Internet. (3) Harmful consequences. Introducing something new into a socio-technical system may set in motion a chain of events that will eventually harm stakeholders in the socio-technical system. For example, giving laptop computers to public school students may produce long term environmental harm when careless disposal of spent laptops releases toxic materials into the environment.
- The following table helps summarize some of these problem categories and then outlines generic solutions.

Problem Type	Sub-Type	Solution Outline		
Disagreement	Factual	Type and mode of gathering information		
	Conceptual	Concept in dispute and method for agreeing on its definition		
Conflict		Value Integrative	Partially Value Integrative	Trade Off

	<table border="1"> <tr><td>Moral vs. Moral</td></tr> <tr><td>Non-moral vs. moral</td></tr> <tr><td>Non-moral vs. non-moral</td></tr> </table>	Moral vs. Moral	Non-moral vs. moral	Non-moral vs. non-moral			
Moral vs. Moral							
Non-moral vs. moral							
Non-moral vs. non-moral							
Moral Ecologies	<table border="1"> <tr><td>Finance-Driven Ecologies</td></tr> <tr><td>Customer-Driven Ecologies</td></tr> <tr><td>Quality-Driven Ecologies</td></tr> </table>	Finance-Driven Ecologies	Customer-Driven Ecologies	Quality-Driven Ecologies	Strategy for dissenting from a staff position where one is outside decision-making	Practicing ethical advocacy when "going to the mat" on ethical perspectives in group decision-making	Ability to draw attention to ethical values that form center of organization identity
Finance-Driven Ecologies							
Customer-Driven Ecologies							
Quality-Driven Ecologies							
Likely Concepts in Conceptual Disagreement	Public Intellectual Property, Faithful Agency, Professional Integrity, Loyalty, Public Safety and Health, Due Process, Responsible Dissent	Working from Legal Definitions	Bridging: moving from cases to concepts	Discussion: Playing on shared values and trust to reach consensus through dialogue			

The materials on moral ecologies come from Huff, C., Barnard, L., and Frey, W. (2008). "Good computing: a pedagogically focused model of virtue in the practice of computing (parts 1 and 2)", *Journal of Information, Communication and Ethics in Society*, Volume 6, Issues 3 and 4: 246-316. See also, Michael Davis, *Thinking Like An Engineer*, Oxford, 1998, 119-156.

Instructions for Using Problem Classification Table

1. Is your problem a conflict? Moral versus moral value? Moral versus non-moral values? Non-moral versus non-moral values? Identify the conflicting values as concisely as possible. Example: In Toysmart, the financial values of creditors come into conflict with the privacy of individuals in the data base: financial versus privacy values.
2. Is your problem a disagreement? Is the disagreement over basic facts? Are these facts observable? Is it a disagreement over a basic concept? What is the concept? Is it a factual disagreement that, upon further reflection, changes into a conceptual disagreement?
3. Does your problem arise from an impending harm? What is the harm? What is its magnitude? What is the probability that it will occur?
4. If your problem is a value conflict then can these values be fully integrated in a value integrating solution? Or must they be partially realized in a compromise or traded off against one another?
5. If your problem is a factual disagreement, what is the procedure for gathering the required information, if this is feasible?

6. If your problem is a conceptual disagreement, how can this be overcome? By consulting a government policy or regulation? (OSHA on safety for example.) By consulting a theoretical account of the value in question? (Reading a philosophical analysis of privacy.) By collecting past cases that involve the same concept and drawing analogies and comparisons to the present case?

Moral Ecologies

- "Moral Ecology" refers to the organization in which one works. Calling this organization an "ecology" conveys the idea that it is a system of interrelated parts. These "ecologies" differ depending on the content of the organization's central, identity-conferring values.
- In finance-driven companies, financial values form the core of the organization's identity. Ethical advocacy requires skills in bringing ethical issues to the attention of decision-makers and getting them to take these issues seriously. It helps to state ethical concerns in multi-disciplinary language. (For example, show that ignoring ethical concerns will cost the company money in the long run.)
- Customer-driven ecologies place customer values like usability, affordability, and efficiency, in the forefront of group deliberation and decision-making. Often, one must play the role of "ethics advocate" in deliberation and decision-making. One is expected to argue forcefully and persistently ("go to the mat") to make sure that ethical considerations are integrated into group deliberations and decision-making.
- Quality-driven companies place ethical values into the core of group deliberations and decision-making. Here one is not so much ethics advocate as ethics enabler. This new role requires that one help one's group find creative ways of integrating ethical values with other concerns like customer and financial values.

If you are having problems specifying your problem

- Try identifying the stakeholders. Stakeholders are any group or individual with a vital interest at stake in the situation at hand.
- Project yourself imaginatively into the perspectives of each stakeholder. How does the situation look from their standpoint? What are their interests? How do they feel about their interests?
- Compare the results of these different imaginative projections. Do any stakeholder interests conflict? Do the stakeholders themselves stand in conflict?
- If the answer to one or both of these questions is "yes" then this is your problem statement. How does one reconcile conflicting stakeholders or conflicting stakeholder interests in this situation?

Framing Your Problem

- We miss solutions to problems because we choose to frame them in only one way.
- For example, the Mountain Terrorist Dilemma is usually framed in only one way: as a dilemma, that is, a forced decision between two equally undesirable alternatives. (Gilbane Gold is also framed as a dilemma: blow the whistle on Z-Corp or go along with the excess pollution.)
- Framing a problem differently opens up new horizons of solution. Your requirement from this point on in the semester is to frame every problem you are assigned in at least two different ways.
- For examples of how to frame problems using socio-technical system analysis see module m14025.
- These different frames are summarized in the next box below.

Different Frames for Problems

- **Technical Frame:** Engineers frame problems technically, that is, they specify a problem as raising a technical issue and requiring a technical design for its resolution. For example, in the Hughes case, a technical frame would raise the problem of how to streamline the manufacturing and testing processes of the chips.
- **Physical Frame:** In the Laminating Press case, the physical frame would raise the problem of how the layout of the room could be changed to reduce the white powder. Would better ventilation eliminate or mitigate the white powder problem?

- **Social Frame:** In the "When in Aguadilla" case, the Japanese engineer is uncomfortable working with the Puerto Rican woman engineer because of social and cultural beliefs concerning women still widely held by men in Japan. Framing this as a social problem would involve asking whether there would be ways of getting the Japanese engineer to see things from the Puerto Rican point of view.
- **Financial or Market-Based Frames:** The DOE, in the Risk Assessment case below, accuses the laboratory and its engineers of trying to extend the contract to make more money. The supervisor of the head of the risk assessment team pressures the team leader to complete the risk assessment as quickly as possible so as not to lose the contract. These two framings highlight financial issues.
- **Managerial Frame:** As the leader of the Puerto Rican team in the "When in Aguadilla" case, you need to exercise leadership in your team. The refusal of the Japanese engineer to work with a member of your team creates a management problem. What would a good leader, a good manager, do in this situation? What does it mean to call this a management problem? What management strategies would help solve it?
- **Legal Frame:** OSHA may have clear regulations concerning the white powder produced by laminating presses. How can you find out about these regulations? What would be involved in complying with them? If they cost money, how would you get this money? These are questions that arise when you frame the Laminating Press case as a legal problem.
- **Environmental Framing:** Finally, viewing your problem from an environmental frame leads you to consider the impact of your decision on the environment. Does it harm the environment? Can this harm be avoided? Can it be mitigated? Can it be offset? (Could you replant elsewhere the trees you cut down to build your new plant?) Could you develop a short term environmental solution to "buy time" for designing and implementing a longer term solution? Framing your problem as an environmental problem requires that you ask whether this solution harms the environment and whether this harming can be avoided or remedied in some other way.

Solution Generation

In solution generation, agents exercise moral creativity by brainstorming to come up with solution options designed to resolve the disagreements and value conflicts identified in the problem specification stage. Brainstorming is crucial to generating nonobvious solutions to difficult, intractable problems. This process must take place within a non-polarized environment where the members of the group respect and trust one another. (See the module on the Ethics of Group Work for more information on how groups can be successful and pitfalls that commonly trip up groups.) Groups effectively initiate the brainstorming process by suspending criticism and analysis. After the process is completed (say, by meeting a quota), then participants can refine the solutions generated by combining them, eliminating those that don't fit the problem, and ranking them in terms of their ethics and feasibility. If a problem can't be solved, perhaps it can be dissolved through reformulation. If an entire problem can't be solve, perhaps the problem can be broken down into parts some of which can be readily solved.

Having trouble generating solutions?

- One of the most difficult stages in problem solving is to jump start the process of brainstorming solutions. If you are stuck then here are some generic options guaranteed to get you "unstuck."
- **Gather Information:** Many disagreements can be resolved by gathering more information. Because this is the easiest and least painful way of reaching consensus, it is almost always best to start here. Gathering information may not be possible because of different constraints: there may not be enough time, the facts may be too expensive to gather, or the information required goes beyond scientific or technical knowledge. Sometimes gathering more information does not solve the problem but allows for a new, more fruitful formulation of the problem. Harris, Pritchard, and Rabins in *Engineering Ethics: Concepts and Cases* show how solving a factual disagreement allows a more profound conceptual disagreement to emerge.
- **Nolo Contendere.** Nolo Contendere is latin for not opposing or contending. Your interests may conflict with your supervisor but he or she may be too powerful to reason with or oppose. So your only choice here is to give in to his or her interests. The problem with nolo contendere is that non-opposition is often

taken as agreement. You may need to document (e.g., through memos) that your choosing not to oppose does not indicate agreement.

- **Negotiate.** Good communication and diplomatic skills may make it possible to negotiate a solution that respects the different interests. Value integrative solutions are designed to integrate conflicting values. Compromises allow for partial realization of the conflicting interests. (See the module, The Ethics of Team Work, for compromise strategies such as logrolling or bridging.) Sometimes it may be necessary to set aside one's interests for the present with the understanding that these will be taken care of at a later time. This requires trust.
- **Oppose.** If *nolo contendere* and negotiation are not possible, then opposition may be necessary. Opposition requires marshalling evidence to document one's position persuasively and impartially. It makes use of strategies such as leading an "organizational charge" or "blowing the whistle." For more on whistle-blowing consult the discussion of whistle blowing in the Hughes case that can be found at computing cases.
- **Exit.** Opposition may not be possible if one lacks organizational power or documented evidence. *Nolo contendere* will not suffice if non-opposition implicates one in wrongdoing. Negotiation will not succeed without a necessary basis of trust or a serious value integrative solution. As a last resort, one may have to exit from the situation by asking for reassignment or resigning.

Refining solutions

- Are any solutions blatantly unethical or unrealizable?
- Do any solutions overlap? Can these be integrated into broader solutions?
- Can solutions be brought together as courses of action that can be pursued simultaneously?
- Go back to the problem specification? Can any solutions be eliminated because they do not address the problem? (Or can the problem be revised to better fit what, intuitively, is a good solution.)
- Can solutions be brought together as successive courses of action? For example, one solution represents Plan A; if it does not work then another solution, Plan B, can be pursued. (You negotiate the problem with your supervisor. If she fails to agree, then you oppose your supervisor on the grounds that her position is wrong. If this fails, you conform or exit.)
- **The goal here is to reduce the solution list to something manageable, say, a best, a second best, and a third best. Try adding a bad solution to heighten strategic points of comparison. The list should be short so that the remaining solutions can be intensively examined as to their ethics and feasibility.**

Solution Testing: The solutions developed in the second stage must be tested in various ways.

1. **Reversibility:** Would I still think the choice of this option good if I were one of those adversely affected by it? (Davis uses this formulation in various publications.) I identify different stakeholders and then take up their roles. Through this imaginative projection, I should consider how the action under consideration will affect them and how they will view, interpret, and experience this affect.
2. **Harm:** Does this option do less harm than any available alternative? Here I try to design an action that will minimize harmful effects. I should factor in the likely results of the action under consideration but I should also evaluate how justly these results will be distributed among stakeholders.
3. **Publicity:** What kind of person will I become if I choose this action? This is Davis' formulation of this test as a virtue test. The key to this test is that you associate the agent with the action. If I (the agent) am publicly judged as a person in terms of this action, what does this say about me as a person? Am I comfortable being judged an irresponsible person on the basis of my being identified with my irresponsible action?
4. **Meta-Test - Convergence:** Do a quick inventory here. Do the ethics tests come together and agree on ranking this solution as a strong one? Then this solution satisfies the convergence meta-test and this provides independent evidence of the strength of the solution.
5. **Meta-Test - Divergence:** Again, do a quick inventory of your solution evaluation matrix results to this point. Do the tests differ or diverge on this point? This is independent evidence of the weakness of this solution. Think about why this solution may be strong under one test but weak under the others.

6. The solution evaluation matrix presented just below models and summarizes the solution testing process.

Solution/Test	Reversibility	Harm	Publicity	Meta-Test: Convergence	Meta-Test: Divergence
Description	Would I still think the choice of this option good if I were one of those adversely affected by it? (Davis)	Does this option do less harm than any available alternative?	What person would I become were I to choose and perform this action? (Associating my character with the moral color of the action.)	Do the three ethics tests (reversibility, harm, publicity) come together on this solution?	Do the three ethics tests (reversibility, harm, publicity) differ on this solution?
Your best solution					
A good (but not the best) solution					
Your worst solution or a really bad solution					

Solution Evaluation Matrix

Solution Implementation

The chosen solution must be examined in terms of how well it responds to various situational constraints that could impede its implementation. What will be its costs? Can it be implemented within necessary time constraints? Does it honor recognized technical limitations or does it require pushing these back through innovation and discovery? Does it comply with legal and regulatory requirements? Finally, could the surrounding organizational, political, and social environments give rise to obstacles to the implementation of the solution? In general this phase requires looking at interest, technical, and resource constraints or limitations. A Feasibility Matrix helps to guide this process.

The Feasibility Tests focuses on situational constraints. How could these hinder the implementation of the solution? Should the solution be modified to ease implementation? Can the constraints be removed or remodeled by negotiation, compromise, or education? Can implementation be facilitated by modifying both the solution and changing the constraints?

Feasibility Matrix		
Resource Constraints	Technical Constraints	Interest Constraints
		Personalities
Time		Organizational
Cost	Applicable Technology	Legal
Materials	Manufacturability	Social, Political, Cultural

Different Feasibility Constraints

1. The Feasibility Test identifies the constraints that could interfere with realizing a solution. This test also sorts out these constraints into **resource** (time, cost, materials), **interest** (individuals, organizations, legal, social, political), and **technical** limitations. By identifying situational constraints, problem-solvers can anticipate implementation problems and take early steps to prevent or mitigate them.
2. **Time.** Is there a deadline within which the solution has to be enacted? Is this deadline fixed or negotiable?
3. **Financial.** Are there cost constraints on implementing the ethical solution? Can these be extended by raising more funds? Can they be extended by cutting existing costs? Can agents negotiate for more money for implementation?
4. **Technical.** Technical limits constrain the ability to implement solutions. What, then, are the technical limitations to realizing and implementing the solution? Could these be moved back by modifying the solution or by adopting new technologies?
5. **Manufacturability.** Are there manufacturing constraints on the solution at hand? Given time, cost, and technical feasibility, what are the manufacturing limits to implementing the solution? Once again, are these limits fixed or flexible, rigid or negotiable?
6. **Legal.** How does the proposed solution stand with respect to existing laws, legal structures, and regulations? Does it create disposal problems addressed in existing regulations? Does it respond to and minimize the possibility of adverse legal action? Are there legal constraints that go against the ethical values embodied in the solution? Again, are these legal constraints fixed or negotiable?
7. **Individual Interest Constraints.** Individuals with conflicting interests may oppose the implementation of the solution. For example, an insecure supervisor may oppose the solution because he fears it will undermine his authority. Are these individual interest constraints fixed or negotiable?
8. **Organizational.** Inconsistencies between the solution and the formal or informal rules of an organization may give rise to implementation obstacles. Implementing the solution may require support of those higher up in the management hierarchy. The solution may conflict with organization rules, management structures, traditions, or financial objectives. Once again, are these constraints fixed or flexible?
9. **Social, Cultural, or Political.** The socio-technical system within which the solution is to be implemented contains certain social structures, cultural traditions, and political ideologies. How do these stand with respect to the solution? For example, does a climate of suspicion of high technology threaten to create political opposition to the solution? What kinds of social, cultural, or political problems could arise? Are these fixed or can they be altered through negotiation, education, or persuasion?

Ethics Tests For Solution Evaluation

Three ethics tests (reversibility, harm/beneficence, and public identification) encapsulate three ethical approaches (deontology, utilitarianism, and virtue ethics) and form the basis of stage three of the SDC, solution testing. A fourth test (a value realization test) builds upon the public identification/virtue ethics test by evaluating a solution in terms of the values it harmonizes, promotes, protects, or realizes. Finally a code

test provides an independent check on the ethics tests and also highlights intermediate moral concepts such as safety, health, welfare, faithful agency, conflict of interest, confidentiality, professional integrity, collegiality, privacy, property, free speech, and equity/access). The following section provides advice on how to use these tests. More information can be found at www.computingcases.org.

Setting Up the Ethics Tests: Pitfalls to avoid

Set-Up Pitfalls: Mistakes in this area lead to the analysis becoming unfocused and getting lost in irrelevancies. (a) Agent-switching where the analysis falls prey to irrelevancies that crop up when the test application is not grounded in the standpoint of a single agent, (b) Sloppy action-description where the analysis fails because no specific action has been tested, (c) Test-switching where the analysis fails because one test is substituted for another. (For example, the public identification and reversibility tests are often reduced to the harm/beneficence test where harmful consequences are listed but not associated with the agent or stakeholders.)

Set up the test

1. Identify the agent (the person who is going to perform the action)
2. Describe the action or solution that is being tested (what the agent is going to do or perform)
3. Identify the stakeholders (those individuals or groups who are going to be affected by the action), and their stakes (interests, values, goods, rights, needs, etc.
4. Identify, sort out, and weigh the consequences (the results the action is likely to bring about)

Harm/Beneficence Test

- What harms would accompany the action under consideration? Would it produce physical or mental suffering, impose financial or non-financial costs, or deprive others of important or essential goods?
- What benefits would this action bring about? Would it increase safety, quality of life, health, security, or other goods both moral and non-moral?
- What is the magnitude of each these consequences? Magnitude includes likelihood it will occur (probability), the severity of its impact (minor or major harm) and the range of people affected.
- Identify one or two other viable alternatives and repeat these steps for them. Some of these may be modifications of the basic action that attempt to minimize some of the likely harms. These alternatives will establish a basis for assessing your alternative by comparing it with others.
- Decide on the basis of the test which alternative produces the best ratio of benefits to harms?
- Check for inequities in the distribution of harms and benefits. Do all the harms fall on one individual (or group)? Do all of the benefits fall on another? If harms and benefits are inequitably distributed, can they be redistributed? What is the impact of redistribution on the original solution imposed?

Pitfalls of the Harm/Beneficence Test

1. "Paralysis of Analysis" comes from considering too many consequences and not focusing only on those relevant to your decision.
2. Incomplete Analysis results from considering too few consequences. Often it indicates a failure of moral imagination which, in this case, is the ability to envision the consequences of each action alternative.
3. Failure to compare different alternatives can lead to a decision that is too limited and one-sided.
4. Failure to weigh harms against benefits occurs when decision makers lack the experience to make the qualitative comparisons required in ethical decision making.
5. Finally, justice failures result from ignoring the fairness of the distribution of harms and benefits. This leads to a solution which may maximize benefits and minimize harms but still give rise to serious injustices in the distribution of these benefits and harms.

Reversibility Test

1. Set up the test by (i) identifying the agent, (ii) describing the action, and (iii) identifying the stakeholders and their stakes.
2. Use the stakeholder analysis to identify the relations to be reversed.
3. Reverse roles between the agent (you) and each stakeholder: put them in your place (as the agent) and yourself in their place (as the one subjected to the action).
4. If you were in their place, would you still find the action acceptable?

Cross Checks for Reversibility Test (These questions help you to check if you have carried out the reversibility test properly.)

- Does the proposed action treat others with respect? (Does it recognize their autonomy or circumvent it?)
- Does the action violate the rights of others? (Examples of rights: free and informed consent, privacy, freedom of conscience, due process, property, freedom of expression)
- Would you recommend that this action become a universal rule?
- Are you, through your action, treating others merely as means?

Pitfalls of the Reversibility Test

- Leaving out a key stakeholder relation
- Failing to recognize and address conflicts between stakeholders and their conflicting stakes
- Confusing treating others with respect with capitulating to their demands (“Reversing with Hitler”)
- Failing to reach closure, i.e., an overall, global reversal assessment that takes into account all the stakeholders the agent has reversed with.

Steps in Applying the Public Identification Test

- Set up the analysis by identifying the agent, describing the action, and listing the key values or virtues at play in the situation.
- Associate the action with the agent.
- Describe what the action says about the agent as a person. Does it reveal him or her as someone associated with a virtue or a vice?

Alternative Version of Public Identification

- Does the action under consideration realize justice or does it pose an excess or defect of justice?
- Does the action realize responsibility or pose an excess or defect of responsibility?
- Does the action realize reasonableness or pose too much or too little reasonableness?
- Does the action realize honesty or pose too much or too little honesty?
- Does the action realize integrity or pose too much or too little integrity?

Pitfalls of Public Identification

- Action not associated with agent. The most common pitfall is failure to associate the agent and the action. The action may have bad consequences and it may treat individuals with respect but these points are not as important in the context of this test as what they imply about the agent as a person who deliberately performs such an action.
- Failure to specify moral quality, virtue, or value. Another pitfall is to associate the action and agent but only ascribe a vague or ambiguous moral quality to the agent. To say, for example, that willfully harming the public is bad fails to zero in on precisely what moral quality this ascribes to the agent. Does it render him or her unjust, irresponsible, corrupt, dishonest, or unreasonable? The virtue list given above will help to specify this moral quality.

Code of Ethics Test

- Does the action hold paramount the health, safety, and welfare of the public, i.e., those affected by the action but not able to participate in its design or execution?
- Does the action maintain faithful agency with the client by not abusing trust, avoiding conflicts of interest, and maintaining confidences?
- Is the action consistent with the reputation, honor, dignity, and integrity of the profession?
- Does the action serve to maintain collegial relations with professional peers?

Meta Tests

- The ethics and feasibility tests will not always converge on the same solution. There is a complicated answer for why this is the case but the simple version is that the tests do not always agree on a given solution because each test (and the ethical theory it encapsulates) covers a different domain or dimension of the action situation. Meta tests turn this disadvantage to your advantage by feeding the interaction between the tests on a given solution back into the evaluation of that solution.
- When the ethics tests converge on a given solution, this convergence is a sign of the strength and robustness of the solution and counts in its favor.
- When a given solution responds well to one test but does poorly under another, this is a sign that the solution needs further development and revision. It is not a sign that one test is relevant while the others are not. Divergence between test results is a sign that the solution is weak.

Application Exercise

You will now practice the four stages of decision making with a real world case. This case, Risk Assessment, came from a retreat on Business, Science, and Engineering Ethics held in Puerto Rico in December 1998. It was funded by the National Science Foundation, Grant SBR 9810253.

Risk Assessment Scenario

Case Scenario: You supervise a group of engineers working for a private laboratory with expertise in nuclear waste disposal and risk assessment. The DOE (Department of Energy) awarded a contract to your laboratory six years ago to do a risk assessment of various nuclear waste disposal sites. During the six years in which your team has been doing the study, new and more accurate calculations in risk assessment have become available. Your laboratory's study, however, began with the older, simpler calculations and cannot integrate the newer without substantially delaying completion. You, as the leader of the team, propose a delay to the DOE on the grounds that it is necessary to use the more advanced calculations. Your position is that the laboratory needs more time because of the extensive calculations required; you argue that your group must use state of the art science in doing its risk assessment. The DOE says you are using overly high standards of risk assessment to prolong the process, extend the contract, and get more money for your company. They want you to use simpler calculations and finish the project; if you are unwilling to do so, they plan to find another company that thinks differently. Meanwhile, back at the laboratory, your supervisor (a high level company manager) expresses to you the concern that while good science is important in an academic setting, this is the real world and the contract with the DOE is in jeopardy. What should you do?

Part One: Problem Specification

1. Specify the problem in the above scenario. Be as concise and specific as possible
2. Is your problem best specifiable as a disagreement? Between whom? Over what?
3. Can your problem be specified as a value conflict? What are the values in conflict? Are the moral, nonmoral, or both?

Part Two: Solution Generation

1. Quickly and without analysis or criticism brainstorm 5 to ten solutions
2. Refine your solution list. Can solutions be eliminated? (On what basis?) Can solutions be combined? Can solutions be combined as plan a and plan b?

3. If you specified your problem as a disagreement, how do your solutions resolve the disagreement? Can you negotiate interests over positions? What if your plan of action doesn't work?
4. If you formulated your problem as a value conflict, how do your solutions resolve this conflict? By integrating the conflicting values? By partially realizing them through a value compromise? By trading one value off for another?

Part Three: Solution Testing

1. Construct a solution evaluation matrix to compare two to three solution alternatives.
2. Choose a bad solution and then compare to it the two strongest solutions you have.
3. Be sure to avoid the pitfalls described above and set up each test carefully.

Part Four: Solution Implementation

1. Develop an implementation plan for your best solution. This plan should anticipate obstacles and offer means for overcoming them.
2. Prepare a feasibility table outlining these issues using the table presented above.
3. Remember that each of these feasibility constraints is negotiable and therefore flexible. If you choose to set aside a feasibility constraint then you need to outline how you would negotiate the extension of that constraint.

Decision-Making Presentation

<https://cnx.org/content/m13757/>

Clicking on this figure will allow you to open a presentation designed to introduce problem solving in ethics as analogous to that in design, summarize the concept of a socio-technical system, and provide an orientation in the four stages of problem solving. This presentation was given February 28, 2008 at UPRM for ADMI 6005 students, Special Topics in Research Ethics.

Problem Solving Presentation

<https://cnx.org/content/m13757/>

Shortened Presentation for Fall 2012

<https://cnx.org/content/m13757/>

Vigo Socio-Technical System Table and Problems

<https://cnx.org/content/m13757/>

Decision Making Worksheet

<https://cnx.org/content/m13757/>

This exercise is designed to give you practice with

the three frameworks
described in this module.
It is based on the case,
"When in Aguadilla."

Test Rubric Fall 2009: Problem-Solving
<https://cnx.org/content/m13757/>

Ethical Leadership Using "Incident at Morales"

Module Introduction

In this module, you will view the DVD Incident at Morales and carry out a series of activities designed to familiarize you with issues in ethical leadership, social responsibility, and globalization. Links to interviews with major figures on globalization, to the Connexions module "Socio Technical Systems in Decision Making" and to online material on "Incident at Morales" will help you to gather the information you need to complete this module.

Issues in Incident at Morales

- Quotes are taken from the Study Guide to "Incident at Morales"
- Confidentiality: "Although the lawyers note that Fred has no legal obligations to Chemitoil because he did not sign a non-disclosure agreement, does Fred have a moral obligation to ensure the confidentiality of the information he may have learned at Chemitoil?"
- Wally's "One Rule": What is the impact of Wally's "One Rule" on Fred's ability to do his job? More importantly, does this interfere with Fred's ability to meet his professional ethical obligations in the course of conducting his job?"
- **Lutz and Lutz** Controls: Wally claims that **Lutz and Lutz** controls are the best among the available alternatives. He also claims that the fact that Chuck's brother-in-law works with **Lutz and Lutz** is not a relevant factor. How should Fred choose in this situation regarding controls?
- Couplings: In choosing both the type of couplings and piping as well as to use a local (Mexico) supplier without a plant inspection, what factors should Fred take into account? What should be the margin of error in terms of pressure? How does Fred balance safety and reliability with the need to cut costs due to the parent company's recent acquisitions?
- Environmental Regulations--When in Rome...: Should Fred take advantage of less strict environmental regulations in Mexico to save money for Phaust corporation? What are the responsibilities of multi-national corporations that operate in countries like Mexico?

Exercise 1: Incident at Moral Socio-Technical System

Prepare a socio-technical analysis of Morales, Mexico. Your analysis will examine the insertion of the Phaust chemical plant into the Morales context. Using the following list of values, can you identify any potential value conflicts? Safety, Equity/Justice, intellectual property, confidentiality, responsibility, reasonableness.

Preparing a STS Table

- Study the two templates in the module, "Socio Technical Systems in Professional Decision Making." See which one applies best to the Incident at Morales case.
- Redo the headings of the table substituting relevant items for those in the templates that are not relevant. For example, in preparing a STS table for a computer system, you may wish to change rate and rate structures into something like data and data structures.
- Fill in the relevant columns in your newly revised table. For example, in the Incident at Morales, the description of the physical surroundings would be based on the brief video segment where Fred is consulting with Wally and Manuel. What is the geographical area like? (It looks like a dry climate given the DVD.) What is the plant like? (It is, at the very least, small.) Attention to detail--even trivial detail--is important for these columns of the STS.
- For the second table, take the short value list we have been working with this semester and (1) look for new value mismatches, (2) identify existing value conflicts, and (3) describe any harmful long term consequences. In Incident at Morales, you may want to concentrate on justice (equity), responsibility for safety, respect, property, and free speech.
- Keep your tables simple and direct. You will have only a few minutes to debrief on them. Remember, this is a device to help you visualize value conflicts hidden in technologies and socio technical systems.

Hardware	Software	Physical Surroundings	People, Groups, Roles	Procedures	Laws, Statutes, Regulations	Data and Data Structures

Socio-Technical System

	Hardware/Software	Physical Surroundings	People, Groups, Roles	Procedures	Laws, Statutes, Regulations	Data and Data Structures
Justice (Equity and Access)	Responsibility					
Responsibility						
Respect (Privacy and Due Process)						
Property						
Free Speech						

STS and Values

Exercise 2: Opportunities for Ethical Leadership

You will be assigned one of the topics described above. Discuss this topic with your group. Answer the questions. Then prepare a brief summary of your answers to share with the rest of the class. The topics, again, are confidentiality, Wally's "One Rule", Lutz and Lutz Controls, the quality and integrity of the couplings, and the difference in environmental regulations. Throughout your reflections look for opportunities open to Fred to demonstrate ethical leadership. What obstacles stand in his way? What can he do to overcome them?

Decision Point for Business Ethics, Fall 2007

- Generate Solutions, Test Solutions, and Develop a Solution Implementation plan from the perspective of Fred. Focus specifically on whether Fred, as an engineer, should sign off on the plant as it is being passed over to operations.
- **Decision Point:** Chuck's solution to the French company's budget cuts was to pass along long term expenses and operational problems to the plant operation group.
- At the end of the video, Fred has been asked to sign off on the plant's documents and, essentially, approve this "pass along" strategy.
- What kind of ethical problems does Chuck's solution create?
- Knowing this, should Fred have signed off on the plant at the end of the video?
- Take Fred's perspective. Generate solutions, test them, and develop an implementation from Fred's perspective. Summarize your group's work by developing a solution table, solution evaluation matrix, and a feasibility table. Be prepared to summarize (not present) these tables informally to the rest of the class.

Decision Alternative	Description	Justification: problem fit, ethics, feasibility
Solution 1		
Solution 2		

Refined Solution Table

Solution / Test	Reversibility	Harm / Benefits	Publicity	Feasibility (Global)
Solution 1				
Solution 2				

Solution Evaluation Matrix

For Feasibility Table, see m14789.

Exercise 3

Read and listen to the interviews with Shiva, who is opposed to globalization, and O'Rourke, who takes a pro-globalization. Summarize their arguments. Using these arguments, construct your own argument on globalization and apply it to the Morales case: Is the incident that occurred at Morales an inevitable result of globalization or merely the result of bad individual and corporate decisions?

Incident at Morales in Ethics Bowl

Decision Scenario from "Incident at Morales" (Taken from Study Guide)

- "Although the lawyers note that Fred has no legal obligations to Chemitoil because he did not sign a non-disclosure agreement, does Fred have a moral obligation to ensure the confidentiality of the information he may have learned at Chemitoil?"
- Return to the moment where Wally gives Fred the preliminary plant plans. Then place yourself in the following dialogue:
- WALLY Good. Chuck is going to have a project kick-off meeting this afternoon. Your plant design will be on the agenda. It'll be at three. We don't waste time around here. We're fast at Phaust. Corporate tag line. As Fred gazes around his new work-station, smiling, Wally starts routing through a filing cabinet. He finds the preliminary plant plans and hands them to Fred. WALLY You might want to look at this. (hopeful) Tell me if this is like what you were building at your last job.
- You are Fred. Is Wally asking you to violate your (moral) confidentiality obligation with Chemitoil? Present a response to Wally's question. Show how this response respects both your former employer, Chemitoil, and your current employer, Phaust.

Decision Scenario from "Incident at Morales:" Environmental Integrity or Reliable Controls

- You are Fred. After you point out to Wally, that Lutz and Lutz controls are expensive, he advises you to "pick your fights when you can win them." (Chuck's brother-in-law is the customer representative for Lutz and Lutz.) On the other hand your wife, an EPA compliance litigator, points out how dangerous it is to put untreated toxic waste material in unlined evaporation ponds because of the possibility of drinking water contamination.

- You think about taking Wally's advice. Which fight should you choose, saving the environment while opting for cheaper controls or remaining with the expensive Lutz and Lutz controls but going ahead with the unlined evaporation ponds?
- In your presentation address this broader issue. Is Wally right? Should we trade off safety and environmental concerns when the budget is tight?

Practical and Professional Ethics Bowl Activity: Follow-Up In-Depth Case Analysis

This module outlines of how to incorporate three frameworks (software development cycle, ethics tests, and feasibility test) into Ethics Bowl case summaries and Ethics Bowl in-depth case analysis. It assumes knowledge of ethics tests, a decision procedure based on the software development cycle, familiarity with problem specification activities, and an understanding of how to carry out a stakeholder analysis. Finally, it provides students a chance to achieve closure on their participation in the Practical and Professional Ethics Bowl, a competition based on the Ethics Bowl held annually at meetings of the Association for Practical and Professional Ethics. Information on the national competition, devised by Dr. Robert Ladenson, can be found at the website of the Center for the Study of Ethics in the Professions, www.iit.edu/departments/csep. This module is being developed as a part of an NSF-funded project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

Module Introduction

This module provides students with a structure for preparing an in-depth case study analysis based on feedback they have received through their participation in an **Ethics Bowl** competition as part of the requirements for courses in Practical and Professional Ethics taught at the University of Puerto Rico at Mayaguez. Students viewing this module will find formats for analyzing decision making cases and position cases such as the decisions published by the National Society of Professional Engineers **Board of Ethical Review**. They will receive information pertinent to preparing in-depth case analyses, short summaries of the case pool for the Ethics Bowl competition, and a summary of procedures for carrying out a group self-evaluation. More information on the Engineering Ethics Bowl carried out at UPRM can be found in Jose A Cruz-Cruz, William J. Frey, and Halley D. Sanchez, "The Ethics Bowl in Engineering Ethics at the University of Puerto Rico - Mayaguez" in *Teaching Ethics* 4(3): 15-32.

Choosing Your Case

1. You must choose one of the two cases you presented on in the Ethics Bowl. (This means the case on which you gave your initial presentation.)
2. You may choose either the first round decision-making case or the NSPE Board of Ethical Review Case

How should you choose your case?

1. Which case did you find the most interesting, challenging, or fruitful?
2. On which case did you receive the most interesting feedback from the other team and the judges?
3. Do you want to make, defend, and implement a decision or analyze a BER decision?

Once you choose your case, you need to analyze it according to the following steps:

Decision-Making Cases

Worksheets	Decision-Making Case
	Identify and state the (ethically) relevant facts
STS Table (Table + Verbal Explanation)	Prepare a Socio-Technical Analysis. Fill in the STS table (see below) and then verbally describe each component.
Value Table (Table + Written Problem Statement)	Fill out a Value Table (see below) Use it to identify the ethical problem or problems. Summarize this by providing a concise problem statement that is explicitly tied to the Value Table.

Brainstorm Lists (initial and refined lists)	4. Brainstorm solution to the problem or problems. Be sure to discuss how list was generated and how it was refined. Describe value integration and interest negotiating strategies used.
Solution Evaluation Matrix (Matrix + Verbal Explanation and Justification)	5. Compare, evaluate, and rank the solutions
	6. Choose the best available solution. Provide a justification summarizing ethical and feasibility considerations highlighted in Solution Evaluation Matrix.
Feasibility Matrix (Matrix + Verbal Explanation)	7. Develop a plan for implementing your solution. Discuss and justify this plan explicitly in terms of the specific feasibility considerations in the Feasibility Matrix.
	Develop and discuss preventive measures (if applicable)

NSPE-BER Case

Worksheets	
	1. Identify and state the (ethically) relevant facts
Stakeholders (Matrix + Verbal Explanation)	2. Identify the stakeholders and their stakes.
Problem Classification (Matrix + Concise Verbal Problem Statement)	3. Identify the ethical problem or problems
	4. State the BER decision and summarize their code-based justification (cite code provisions, summarize principles, and list relevant precedents)
Solution Evaluation (Matrix + detailed verbal explanation and justification)	5. Evaluate the BER decision using the three ethics tests, code test, and global feasibility test.
	6. Construct a strong counter-position and counter-argument to the BER decision
Solution Evaluation (Matrix + detailed verbal explanation and justification)	7. Evaluate counter-position and counter-argument using the 3 ethics tests, feasibility test, and code test
Solution Implementation (Feasibility Matrix + Verbal Explanation)	8. Evaluate counter-position and counter-argument in terms of relevant feasibility considerations. Provide a matrix/table + verbal explanation.

In-Depth Analysis: Step by Step

Description of In-Depth Case Analysis

Title of Assignment: "In-Depth Case Analysis"

Due Date for Written Projects: One week after the last class of the semester.

What is required?

1. Participation in at two ethics bowl competitions.
2. Each group will choose from the two cases it debated in the Ethics Bowl a case for a more extended analysis carrying out the seven-step decision making framework. They will prepare an extended analysis of this case (10 to 20 pages).
3. Each group will prepare summaries of the 15 cases assigned for the ethics bowl. These summaries (a minimum of one page for each case) will be handed in with the extended case study analysis. These summaries should include a problem statement, a solution evaluation matrix, and a feasibility matrix.
4. Each final submission will also include a group self-evaluation. This evaluation will include:
 - ____ a list of the goals each group set for itself
 - ____ a careful, justified and documented assessment of your success in reaching these goals
 - ____ a careful assessment of what you did and did not learn in this activity
 - ____ a discussion of obstacles you encountered and measures your group took to overcome these.
 - ____ a discussion of member participation and contribution including the member contribution forms
 - ____ in general what worked and what didn't work for you and your group in this activity
5. A group portfolio consisting of the materials prepared by your group during the group class activities:
 - ____ Virtue Chart (Responsibility)
 - ____ Gray Matters Solution Evaluation Matrix
 - ____ Rights Chart: Free & Informed Consent
 - ____ Group Code of Ethics

Structure of Written Analysis

1. A brief summary of the case focusing on the ethically relevant facts.
2. A Socio-Technical System Table + Short paragraph on each of the seven categories.
3. A Value Table + a short paragraph on the embedded values you have identified and where they occur in the STS. Then state whether you have found any value mismatches, magnified existing value conflicts, and remote/harmful consequences.
4. On the basis of your STS analysis and value conflict analysis, provide a short, concise problem statement. Make sure your the problem you have identified is grounded in your STS and value analysis. If not, one or the other (or both) needs to be changed.
5. A brainstorm list in which you record the solutions your group has designed to solve the problem stated above. The rough unrefined list should include around 10 solutions. Then refine this list into three. Spend time detailing how you reached your refined list. Did you synthesize rough solutions? On what basis did you leave a solution out all together? Did you find other ways of relating or combining solutions? Spend time documenting your brainstorming and refining process. Show in detail how you came up with the refined list.
6. Do a comparative evaluation of three of the refined solutions you developed in the previous step. First, prepare a solution evaluation matrix that summarizes your comparative evaluation. Use the table provided below. Second, provide a verbal account of the solution evaluation and comparison process you present in the solution evaluation matrix.

7. Reach a final decision. Defend your decision using the ethics and feasibility tests. If the decision situation in which you are working is a dynamic one, then propose a series of solutions that you will pursue simultaneously, including how you would respond to contingencies that might arise. (You could express this in the form of a decision tree.)
8. Fill out a Feasibility Matrix. See matrix below
9. Present an implementation plan based on your Feasibility Matrix. This plan should list the obstacles that might arise and how you plan to overcome them. (For example, don't just say, "Blow the whistle." Discuss when, how, where, to whom, and in what manner. How would you deal with reprisals? Would your action seriously disrupt internal relations of trust and loyalty? How would you deal with this?) Work out a detailed plan to implement your decision using the feasibility constraints to "suggest" obstacles and impediments.
10. Finally, discuss preventive measures you can take to prevent this type of problem from arising again in the future.

Hardware	Software	Physical Surroundings	People, Groups, Roles	Procedures	Laws, Statutes, Regulations	Data and Data Structures

Socio-Technical System Table

	Hardware	Software	Physical Surroundings	People, Groups, Roles	Procedures	Laws	Data and Data Structures
Integrity							
Justice							
Respect							
Responsibility for Safety							
Free Speech							
Privacy							
Property							

STS Value Table

Solution/Test	Reversibility or Rights	Harms/Beneficence or Net Utility	Virtue	Value	Code	C E
Description	Is the solution reversible with stakeholders? Does it honor basic rights?	Does the solution produce the best benefit/harm ratio? Does the solution maximize utility?	Does the solution express and integrate key virtues?	Moral values realized? Moral values frustrated? Value conflicts resolved or exacerbated?	Does the solution violate any code provisions?	V r t i c e
Best solution						
Best alternate solution						
Worst solution						

Solution Evaluation Matrix

Feasibility Matrix								
Resource Constraints			Technical Constraints		Interest Constraints			
Time	Cost	Available materials, labor, etc	Applicable technology	Manufacturability	Personalities	Organizational	Legal	Social Political Cultural

Format

1. Group, team-written projects are to be 10-20 pages in length, double spaced, with standard 1-inch margins, and typewritten. This does not include documentation, appendices, and other notes.

2. It is essential that you carefully and fully document the resources that you have consulted. The most direct way to do this is to include numbered entries in a concluding section entitled, "Works Cited". These entries should provide complete bibliographical information according to standard form (Chicago Manual of Style or the MLA Manual of Style). Then insert the number of the entry in parenthesis in the text next to the passage that is based on it. (Example: "The self is a relation that relates itself to its own self...." (4) The number "4" refers to the fourth item in the "Works Cited" section at the end of your paper.)

3. Practical norm 5j of the CIAPR code of ethics sets forth the obligation of the professional engineer to give others due credit for their work. For this reason, plagiarism will not be tolerated in any form. Possible forms of plagiarism include but are not limited to the following:

- Quoting directly from other sources without documenting (footnote or bibliography) and/or without using quotation marks. Claiming that this is an appendix will not excuse this action. Claiming ignorance will not excuse this action.

- Using the ideas or work of others without giving due credit or proper acknowledgment. "Proper acknowledgment", in this context, requires a standard bibliographical reference and the use of quotation marks if the material is being directly quoted.
- If your paper relies exclusively or primarily on extensively quoted materials or materials closely paraphrased from the work of others, then it will not be credited as your work even if you document it. To make it your own, you have to summarize it in your own words, analyze it, justify it, or criticize it.
- You will not be credited for material that you translate from English to Spanish unless you add to it something substantial of your own.
- In general, what you appropriate from another source must be properly digested, analyzed, and expressed in your own words. If you have any questions on this, please ask me.
- Any plagiarized document—one which violates the above rules—will be given a zero. You will be given a chance to make this up, and the grade on the make-up project will be averaged in with the zero given to the plagiarized document. Since this is a group grade, everyone in the group will be treated the same, even though the plagiarizer may be only one person. Each member of the group is responsible to assure that other members do not plagiarize in the name of the group. (Since the due date for the written project is late in the semester, this will probably require that I give the entire group, i.e., all members, an Incomplete.) Each member of the group will be held individually responsible in the above-described manner for the final content of the written report.

4. This is not a research project but an exercise in integrating ethics into real world cases. In Chapters 2 and 3 of *Engineering Ethics: Concepts and Cases*, the authors present a thorough discussion of the case study analysis/problem solving method discussed in class. You also have supporting handouts in your file folders from Magic Copy Center as well as materials I have presented directly in class. *Engineering Ethics: Concepts and Cases* also contains several sample case studies that can help guide you in constructing your own presentation. What I am looking for is a discussion of the case in terms of the ethical approaches and decision-making frameworks we have discussed this semester. You do not need to "wow" me with research into other areas peripherally related to the case; you need to show me that you have practiced decision-making and made a serious effort to integrate ethical considerations into the practice of engineering.

5. The usual criteria concerning formal presentations apply when competing in the Ethics Bowl. Dress professionally.

6. You may write your group, team-written project in either Spanish or English.

7. All competitions will take place in the regular classroom.

Media Files Beginning Spring 2007

These media files provide information on the ethics bowl and the follow-up activities including individual decision point summaries, in-depth case analysis, and group self-evaluation. They have been integrated into the Business Ethics course during the Spring semester, 2008 and will apply from this date on into the future.

Team Member Evaluation Form

<https://cnx.org/content/m13759/>

This file contains the team member rating sheet which each group member must fill out and turn in with his or her group project.

Final Project and Group Self-Evaluation Rubrics

<https://cnx.org/content/m13759/>

This rubric will be used to

grade the in-depth case analysis, the group self-evaluation, and the Ethics Bowl case summaries.

Basic Moral Concepts for Ethics Bowl

<https://cnx.org/content/m13759/>

Clicking on this figure will download the basic moral concepts that you will be integrating into the ethics bowl and your final in-depth case analysis. You will be asked to show how you worked to integrate these concepts in your group self-evaluation.

Intermediate Moral Concepts for Ethics Bowl

<https://cnx.org/content/m13759/>

Clicking on this figure will open a table that summarizes the intermediate moral concepts that are at play in the four cases that are being used in the Ethics Bowl: Hughes, Therac, Toysmart, and Biomatrix.

Ethics Bowl Cases for ADMI 4016: Environment of the Organization

<https://cnx.org/content/m13759/>

Check List

Breakdown of Project Grade:

Group Team-Written Project: 200 points, group grade.

- This is your group's in-depth case analysis
- It will analyze the decision scenario your group presented on in the ethics bowl
- Your task is to give a full and comprehensive analysis of a decision point using the tables presented above, accompanying verbal descriptions, and carrying out the four-stage problem-solving framework of specifying the problem, generating solutions, testing solutions in terms of their ethics, and implementing these solutions.

Nota Bene

- After the Ethics Bowl, I will provide the class with general feedback and presentations on how to prepare the final project. When you submit your final report, I will be looking for how you responded to my comments and suggestions and to the comments and suggestions of the judges and the class.

- Attendance is mandatory for all Ethics Bowl competitions. This is important because you will help one another by the comments and discussions that are generated by the presentations. Students not competing need to listen actively and respectfully to the presenting group. Keep in mind the twin standards of respect and professionalism. I will deduct points from the grades of groups and/or individuals who do not listen courteously to the presentations of others or who do not attend class during the presentation cycle.

Nota Bene:

Check List

- **Each group will turn in this checklist, fully filled out and signed. Checking signifies that your group has completed and turned in the item checked. Failure to submit this form will cost your group 20 points**
- ___ One page summaries of the 10 Ethics Bowl decision points taken from the Therac-25, Biomatrix, Toysmart, and Hughes cases.
- ___ Group, in-depth analysis of the case your team presented on in the Ethics Bowl.
- ___ List of Ethically Relevant Facts
- ___ Socio-Technical System Table + Verbal Explanation
- ___ Value Table + Problem Statement + Justification
- ___ List of Brainstormed Solutions + Description of Refining Process + Refined list
- ___ Solution Evaluation Matrix + Verbal Comparison of Three Alternatives from refined solution list
- ___ Chosen Solution + Verbal Justification
- ___ Feasibility Matrix + Solution Implementation Plan concretely described and based on feasibility matrix
- ___ Preventive Measures (if applicable)

Materials Required from Ethics Bowl

- ___ Ethics Bowl Score Sheets
- ___ The decision point your team **presented** on in the competition
- ___ The decision point your team **commented** on in the competition

___ Group Self-Evaluation Form including...

- ___ a list of the goals your group set for itself
- ___ a carefully prepared, justified, and documented assessment of your group's success in reaching these goals
- ___ a careful assessment of what you did and did not learn in this activity
- ___ a discussion of obstacles you encountered and the measures your group took to overcome these
- ___ a discussion of member participation and contribution including the member contribution forms
- ___ a general discussion of what worked and what did not work for you and your group in this activity

___ Each member will turn in a filled out Team Member Evaluation Form. This form can be accessed through the media file listed above. It is suggested that you do this anonymously by turning in your Team Member Evaluation Form in a sealed envelop with the rest of these materials. You are to evaluate yourself along with your teammates on the criteria mentioned in the form. Use the scale suggested in the form.

Group Portfolios Include...

- ___ Virtue Tables including the moral exemplar profile your group prepared and presented.
- ___ The justification using the rights framework of the right assigned to your group. This was one of the rights asserted by engineers against their corporate employers.
- ___ A one page summary of how you developed your role in the Incident at Morales "**Vista Publica.**"
- ___ The code or statement of values summary prepared by your group as a part of the Pirate Code of Ethics module. This summary focused on one of six organizations: East Texas Cancer Center, Biomatrix, Toysmart, Hughes Aircraft, CIAPR, or AECL (in the Therac case).

Copy-paste this checklist, examine the assembled materials prepared by your group, and check the items your group has completed. Then read, copy-paste, and sign the following pledge.

Group Pledge

Ethics of Teamwork

This module developed for classes in Engineering and Computer Ethics at UPRM employs a value/virtue approach to encourage students to reflect on the ethical issues and problems that arise in group or team work. Throughout the class, students are given group assignments for which they receive group grades that are distributed to each individual member. The module then provides students with ethical goals to grade them as they execute these assignments. Student groups develop strategies for realizing these goals. They also envision pitfalls that often prevent groups from working cooperatively such as the Abilene Paradox, groupthink, and group polarization. Finally, students develop an assessment process based on these goals that they use to complete a group self-evaluation at the end of the semester. The primary purpose of this module is to use group work and cooperative learning as an occasion to reflect on the different ethical issues and problems that arise in collective activity. This module is being developed as a part of an NSF-funded project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

- Ethics of Team Work
- William J. Frey (working with material developed by Chuck Huff at St. Olaf College)
- Centro de la Etica en las Profesionas
- University of Puerto Rico - Mayaguez

Module Introduction

Much of your future work will be organized around group or team activities. This module is designed to prepare you for this by getting you to reflect on ethical and practical problems that arise in small groups like work teams. Four issues, based on well-known ethical values, are especially important. How do groups achieve justice (in the distribution of work), responsibility (in specifying tasks, assigning blame, and awarding credit), reasonableness (ensuring participation, resolving conflict, and reaching consensus), and honesty (avoiding deception, corruption, and impropriety)? This module asks that you develop plans for realizing these moral values in your group work this semester. Furthermore, you are provided with a list of some of the more common pitfalls of group work and then asked to devise strategies for avoiding them. Finally, at the end of the semester, you will review your goals and strategies, reflect on your successes and problems, and carry out an overall assessment of the experience.

Module Activities

1. Groups are provided with key ethical values that they describe and seek to realize through group activity.
2. Groups also study various obstacles that arise in collective activity: the Abilene Paradox, Groupthink, and Group Polarization.
3. Groups prepare initial reports consisting of plans for realizing key values in their collective activity. They also develop strategies for avoiding associated obstacles.
4. At the end of the semester, groups prepare a self-evaluation that assesses success in realizing ethical values and avoiding obstacles.
5. Textboxes in this module describe pitfalls in groups activities and offer general strategies for preventing or mitigating them. There is also a textbox that provides an introductory orientation on key ethical values or virtues.

A Framework for Value-Integration

The objective of this module is to teach you to teach yourselves how to work in small groups. You will develop and test procedures for realizing value goals and avoiding group pitfalls. You will also use Socio-Technical System Analysis to help you understand better how to take advantage of the way in which different environments enable groups activities and to anticipate and minimize the way in which other environments can constrain or even oppose group activities.

- **Discovery:** "The goal of this activity is to 'discover' the values that are relevant to, inspire, or inform a given design project, resulting in a list of values and bringing into focus what is often implicit in a design project." [Flanagan et al. 323]. Discovery of group values is a trial and error process. To get started, use the ADEM Statement of Values or the short value profiles listed below.

- **Translation:** "[T]ranslation is the activity of embodying or expressing...values in a system design. Translation is further divided into operationalization, which involves defining or articulating values in concrete terms, and implementation which involves specifying corresponding design features" [Flanagan et al., 338]. You will operationalize your values by developing profiles. (See below or the ADEM Statement of Values for examples.) Then you will implement your values by developing realization procedures. For example, to realize justice in carrying out a group task, first we will discuss the task as a group, second we will divide it into equal parts, third, forth, etc.
- **Verification:** "In the activity of verification, designers assess to what extent they have successfully implemented target values in a given system. [Strategies and methods] may include internal testing among the design team, user testing in controlled environments, formal and informal interviews and surveys, the use of prototypes, traditional quality assurance measures such as automated and regression-oriented testing and more" [Flanagan et al., 344-5]. You will document your procedures in the face of different obstacles that may arise in your efforts at value-realization. At the end of your semester, you will verify your results by showing how you have refined procedures to more effectively realize values.

The framework on value realization and the above-quoted passages can be found in the following resource: M. Flanagan, D. Howe, and H. Nissenbaum, "Embodying Values in Technology: Theory and Practice," in **Information Technology and Moral Philosophy**, Jeroen van den Hoven and John Weckert, Eds. Cambridge, UK: Cambridge University Press, 2008, pp. 322-353.

Value Profiles for Professional Ethics

1. **Definition** - A **value** "refers to a claim about what is worthwhile, what is good. A value is a single word or phrase that identifies something as being desirable for human beings." Brincat and Wike, *Morality and the Professional Life: Values at Work*
2. **Reasonableness** - Defusing disagreement and resolving conflicts through integration. Characteristics include seeking relevant information, listening and responding thoughtfully to others, being open to new ideas, giving reasons for views held, and acknowledging mistakes and misunderstandings. (From Michael Pritchard, *Reasonable Children*)
3. **Responsibility** - The ability to develop moral responses appropriate to the moral issues and problems that arise in one's day-to-day experience. Characteristics include avoiding blame shifting, designing overlapping role responsibilities to fill responsibility "gaps", expanding the scope and depth of general and situation-specific knowledge, and working to expand control and power.
4. **Respect** - Recognizing and working not to circumvent the capacity of autonomy in each individual. Characteristics include honoring rights such as privacy, property, free speech, due process, and participatory rights such as informed consent. Disrespect circumvents autonomy by deception, force, or manipulation.
5. **Justice** - Giving each his or her due. Justice breaks down into kinds such as distributive (dividing benefits and burdens fairly), retributive (fair and impartial administration of punishments), administrative (fair and impartial administration of rules), and compensatory (how to fairly recompense those who have been wrongfully harmed by others).
6. **Trust** - According to Solomon, trust is the expectation of moral behavior from others.
7. **Honesty** - Truthfulness as a mean between too much honesty (bluntness which harms) and dishonesty (deceptiveness, misleading acts, and mendaciousness).
8. **Integrity** - A meta-value that refers to the relation between particular values. These values are integrated with one another to form a coherent, cohesive and smoothly functioning whole. This resembles Solomon's account of the virtue of integrity.

Exercise 1: Developing Strategies for Value Realization

Directions

1. Identify value goals. Start with two or three. You can add or subtract from these as the semester progresses.
2. Give a brief description of each using terms that reflect your group's shared understandings. You may use the descriptions in this module or those in the ADEM Statement of Values but feel free to modify these to fit your group's context. You could also add characteristics and sample rules and aspirations.

3. For each value goal, identify and spell out a procedure for realizing it. See the examples just below for questions that can help you develop value procedures for values like justice and responsibility.

Examples

- Design a plan for realizing key moral values of team work. Your plan should address the following value-based tasks
- How does your group plan on realizing justice? For example, how will you assign tasks within the group that represent a fair distribution of the work load and, at the same time, recognize differences in individual strengths and weaknesses? How does your group plan on dealing with members who fail to do their fair share?
- How does your group plan on realizing responsibility? For example, what are the responsibilities that members will take on in the context of collective work? Who will be the leader? Who will play devil's advocate to avoid groupthink? Who will be the spokesperson for the group? How does your group plan to make clear to each individual his or her task or role responsibilities?
- How does your group plan on implementing the value of reasonableness? How will you guarantee that each individual participates fully in group decisions and activities? How will you deal with the differences, non-agreements, and disagreements that arise within the group? What process will your group use to reach agreement? How will your group insure that every individual has input, that each opinion will be heard and considered, and that each individual will be respected?
- How does your group plan on implementing the value of (academic) honesty? For example, how will you avoid cheating or plagiarism? How will you detect plagiarism from group members, and how will you respond to it?
- Note: Use your imagination here and be specific on how you plan to realize each value. Think preventively (how you plan on avoiding injustice, irresponsibility, injustice, and dishonesty) and proactively (how you can enhance these values). Don't be afraid to outline specific commitments. Expect some of your commitments to need reformulation. At the end of the semester, this will help you write the final report. Describe what worked, what did not work, and what you did to fix the latter.

Obstacles to Group Work (Developed by Chuck Huff for Good Computing: A Virtue Approach to Computer Ethics)

1. The **Abilene Paradox**. "The story involves a family who would all rather have been at home than ends up having a bad dinner in a lousy restaurant in Abilene, Texas. Each believes the others want to go to Abilene and never questions this by giving their own view that doing so is a bad idea. In the Abilene paradox, the group winds up doing something that no individual wants to do because of a breakdown of intra-group communication." (From Huff, Good Computing, an unpublished manuscript for a textbook in computer ethics. See materials from Janis; complete reference below.)
2. **Groupthink**. The tendency for very cohesive groups with strong leaders to disregard and defend against information that goes against their plans and beliefs. The group collectively and the members individually remain loyal to the party line while happily marching off the cliff, all the while blaming "them" (i.e., outsiders) for the height and situation of the cliff. (Also from Huff, **Good Computing**, an unpublished manuscript for a textbook in computer ethics.)
3. **Group Polarization**. Here, individuals within the group choose to frame their differences as disagreements. Framing a difference as non-agreement leaves open the possibility of working toward agreement by integrating the differences or by developing a more comprehensive standpoint that dialectally synthesizes the differences. Framing a difference as disagreement makes it a zero sum game; one's particular side is good, all the others bad, and the only resolution is for the good (one's own position) to win out over the bad (everything else). (Weston provides a nice account of group polarization in Practical Companion to Ethics. This is not to be confused with Cass Sunstein's different account of group polarization in **Infotopia**.)
4. Note: All of these are instances of a social psychological phenomenon called conformity. But there are other processes at work too, like group identification, self-serving biases, self-esteem enhancement, self-fulfilling prophecies, etc.

More Obstacles to Group Work

- **Free Riders:** Free riders are individuals who attempt to "ride for free" on the work of the other members of the group. Some free riders cynically pursue their selfish agenda while others fall into this pitfall because they are unable to meet all their obligations. (See conflict of effort.)
- **Outliers:** These are often mistaken for free riders. Outliers want to become participants but fail to become fully integrated into the group. This could be because they are shy and need encouragement from the other group members. It could also be because the other group members know one another well and have habitual modes of interaction that exclude outsiders. One sign of outliers; they do not participate in group social activities but they still make substantial contributions working by themselves. ("No, I can't come to the meeting--just tell me what I have to do.")
- **Hidden Agendas:** Cass Sunstein introduces this term. A group member with a "hidden agenda" has something he or she wants to contribute but, for some reason or other, hold back. For example, this individual may have tried to contribute something in the past and was "shot down" by the group leader. The next time he or she will think, "Let them figure it out without me."
- **Conflict of Effort:** conflict of Effort often causes an individual to become a free rider or an outlier. These group members have made too many commitments and come unraveled when they all come due at the same time. Students are often overly optimistic when making out their semester schedules. They tightly couple work and class schedules while integrating home responsibilities. Everything goes well as long as nothing unusual happens. But if a coworker gets sick and your supervisor asks you to come in during class times to help out, or you get sick, it becomes impossible to keep the problem from "spilling out" into other areas of your schedule and bringing down the whole edifice. Developing a schedule with periods of slack and flexibility can go a long way toward avoiding conflict of effort. Groups can deal with this by being supportive and flexible. (But it is important to draw the line between being supportive and carrying a free rider.)

Best Practices for Avoiding Abilene Paradox

- At the end of the solution generating process, carry out an anonymous survey asking participants if anything was left out they were reluctant to put before group.
- Designate a Devil's Advocate charged with criticizing the group's decision.
- Ask participants to reaffirm group decision--perhaps anonymously.

Best Practices for Avoiding Groupthink (Taken from Janis, 262-271)

- "The leader of a policy-forming group should assign the role of critical evaluator to each member, encouraging the group to give high priority to airing objections and doubts."
- "The leaders in an organization's hierarchy, when assigning a policy-planning mission to a group, should be impartial instead of stating preferences and expectations at the outset."
- "Throughout the period when the feasibility and effectiveness of policy alternatives are being surveyed, the policy-making group should from time to time divide into two or more subgroups to meet separately...."
- One or more outside experts or qualified colleagues within the organization who are not core members of the policy-making group should be invited to each meeting ...and should be encouraged to challenge the views of the core members."
- "At every meeting devoted to evaluating policy alternatives, at least one member should be assigned the role of devil's advocate."

Best Practices for Avoiding Polarization (Items taken from "Good Computing: A Virtue Approach to Computer Ethics" by Chuck Huff, William Frey and Jose Cruz (Unpublished Manuscript))

- **Set Quotas.** When brainstorming, set a quota and postpone criticism until after quota has been met.
- **Negotiate Interests, not Positions.** Since it is usually easier to integrate basic interests than specific positions, try to frame the problem in terms of interests.
- **Expanding the Pie.** Conflicts that arise from situational constraints can be resolved by pushing back those constraints through negotiation or innovation..
- **Nonspecific Compensation.** One side makes a concession to the other but is compensated for that concession by some other coin.
- **Logrolling.** Each party lowers their aspirations on items that are of less interest to them, thus trading off a concession on a less important item for a concession from the other on a more important item.

- **Cost-Cutting.** One party makes an agreement to reduce its aspirations on a particular thing, and the other party agrees to compensate the party for the specific costs that reduction in aspirations involves.
- **Bridging.** Finding a higher order interest on which both parties agree, and then constructing a solution that serves that agreed-upon interest.

Exercise 2 - Avoiding the Pitfalls of Group Work

- Design a plan for avoiding the pitfalls of group work enumerated in the textbox above.
- How does your group plan on avoiding the Abilene Paradox?
- How does your group plan on avoiding Group Polarization?
- How does your group plan on avoiding Groupthink?
- Note: Use imagination and creativity here. Think of specific scenarios where these obstacles may arise, and what your group can do to prevent them or minimize their impact.

Exercise 3: Socio Technical System

Your group work this semester will take place within a group of nested or overlapping environments. Taken separately and together, these will structure and channel your activity, facilitating action in certain circumstances while constraining, hindering, or blocking it in others. Prepare a socio-technical system table for your group to help structure your group self-evaluation. Include hardware/software, physical surroundings, stakeholders (other groups, teacher, other classes, etc.), procedures (realizing values, avoiding pitfalls), university regulations (attendance), and information structures (collecting, sharing, disseminating)

Some things about Socio-Technical Systems

1. Socio-Technical System Analysis provides a tool to uncover the different environments in which business activity takes place and to articulate how these constrain and enable different business practices.
2. A socio-technical system can be divided into different components such as hardware, software, physical surroundings, people/groups/roles, procedures, laws/statutes/regulations, and information systems.
3. But while these different components can be distinguished, they are in the final analysis inseparable. STSs are, first and foremost, systems composed of interrelated and interacting parts.
4. STSs also embody values such as moral values (justice and responsibility, respect, trust, integrity) and non-moral values (efficiency, satisfaction, productivity, effectiveness, and profitability). These values can be located in one or more of the system components. They come into conflict with one another causing the system to change.
5. STSs change and this change traces out a path or trajectory. The normative challenge of STS analysis is to find the trajectory of STS change and work to make it as value-realizing as possible.

Hardware/Software	Physical Surroundings	Stakeholders	Procedures	University Regulations	Information Structures
Think about the new role for your smart phones in group work in class. Will you be using Google Docs to exchange documents?	How does the classroom and the arrangement of objects within it constrain and enable group activities?	Think about other teachers, classes, supervisors, jobs, and other individuals that can have an impact on	Name but don't describe in detail, the value-realizing procedures your group is adopting.	What are university regulations that will have an impact on your group work. For example, switches between	There is a wealth of information and skill locked in each of your group's members. How will you unleash these and telescope them into

		your ability to carry out group assignments.		MWF and TTH schedules.	group work and activities? How, in other words, will you work to maximize group synergies and minimize group disadvantages?
--	--	--	--	------------------------	---

Socio-Technical System Table for Groups

Exercises 1-3 compose the Preliminary Self-Evaluation which is due shortly after semester-long groups are formed. Exercise 4 is the close-out group self evaluation which is due at the end of the semester.

Exercise 4: Prepare a Final, Group Self-Evaluation

- Due Date: One week after the last class of the semester when your group turns in all its materials.
- Length: A minimum of five pages not including Team Member Evaluation Forms
- Contents:
 1. Restate the Ethical and Practical Goals that your group developed at the beginning of its formation.
 2. Provide a careful, documented assessment of your group’s success in meeting these goals. (Don’t just assert that “Our group successfully realized justice in all its activities this semester.” How did your group characterize justice in the context of its work? What specific activities did the group carry out to realize this value? What, among these activities, worked and what did not work?)
 3. Identify obstacles, shortcomings or failures that you group experienced during the semester. How did these arise? Why did they arise? How did you respond to them? Did your response work? What did you learn from this experience?
 4. Assess the plans you set forth in your initial report on how you intended to realize values and avoid pitfalls. How did these work? Did you stick to your plans or did you find it necessary to change or abandon them in the face of challenges?
 5. Discuss your group’s procedures and practices? How did you divide and allocate work tasks? How did you reach consensus on difficult issues? How did you ensure that all members were respected and allowed significant and meaningful participation? What worked and what did not work with respect to these procedures? Will you repeat them in the future? Would you recommend these procedures as best practices to future groups?
 6. What did you learn from your experience working as a team this semester? What will require further reflection and thought? In other words, conclude your self-evaluation with a statement that summarizes your experience working together as a team this semester.

Appendix for ADMI 4016, Falkl 2013 and following

- What are the results of your group's challenge to the College of Business Administration's Statement of Values? (This can be found in Developing Ethics Codes and Statements of Value. See exercise 2. <http://cnx.org/content/m14319/1.11/>)
- What is your group's CID Structure? See presentation two at the bottom of the module, A Short History of the Corporation. <http://cnx.org/content/m17314/1.7/>

Wrap Up: Some further points to consider...

1. Don’t gloss over your work with generalizations like, “Our group was successful and achieved all of its ethical and practical goals this semester.” Provide evidence for success claims. Detail the procedures designed by your group to bring about these results. Are they “best practices”? What makes them best practices?

2. Sometimes—especially if difficulties arose—it is difficult to reflect on your group’s activities for the semester. Make the effort. Schedule a meeting after the end of the semester to finalize this reflection. If things worked well, what can you do to repeat these successes in the future? If things didn’t work out, what can you do to avoid similar problems in the future? Be honest, be descriptive and avoid blame language.
3. This may sound harsh but get used to it. Self-evaluations—group and individual—are an integral part of professional life. They are not easy to carry out, but properly done they help to secure success and avoid future problems.
4. Student groups—perhaps yours—often have problems. This self-evaluation exercise is designed to help you face them rather than push them aside. Look at your goals. Look at the strategies you set forth for avoiding Abilene, groupthink, and group polarization. Can you modify them to deal with problems? Do you need to design new procedures?

Ethics of Team Work Presentations

Values in Team Work (Thought Experiments)

<https://cnx.org/content/m13760/>

Pitfalls to Avoid in Group Work

<https://cnx.org/content/m13760/>

Thought Experiments on Group Work

<https://cnx.org/content/m13760/>

Team Member Evaluation Forms (Required)

<https://cnx.org/content/m13760/>

New Ethics of Teamwork Presentation (Spring 2012)

<https://cnx.org/content/m13760/>

Ethics of Teamwork Jeopardy

<https://cnx.org/content/m13760/>

Bibliography

1. Weston, A. (2002). **A Practical Companion to Ethics: 2nd Edition**. Oxford, UK: Oxford University Press
2. Flores, F. and Solomon, R. (2003). **Building Trust: In Business, Politics, Relationships and Life**. Oxford, UK: Oxford University Press.
3. Brincat, Cynthia A. and Wike, Victoria S. (2000) **Morality and the Professional Life: Values at Work**. Upper Saddle River, NJ: Prentice Hall.
4. Urban Walker, M. (2006). **Moral Repair: Reconstructing Moral Relations After Wrongdoing**. Cambridge, UK: Cambridge University Press.
5. Pritchard, M. (1996). **Reasonable Children: Moral Education and Moral Learning**. Lawrence, KS: Kansas University Press.
6. Huff, Chuck and Jawer, Bruce. (1994). "Toward a Design Ethic for Computing Professionals." **Social Issues in computing: Putting Computing in its Place**. Eds. Chuck Huff and Thomas Finholt. New York: McGraw-Hill. 130-136.
7. Janis, I. **Groupthink: Psychological Studies of Policy Decisions and Fiascoes--2nd Ed.**. Boston, Mass: Wadsworth.
8. Sunstein, C.R. (2006). **Infotopia: How Many Minds Produce Knowledge**. Oxford, UK: Oxford University Press, 217-225.

Rubrics for Exams and Group Projects in Ethics

A rubric is a device that serves two purposes. First, it presents to students the standards in terms of which they will be graded on some kind of writing activity whether it be an essay test or a formal written paper. Second, it is a grading tool that helps the instructor stay focused on the same set of standards when grading student essays. This module presents rubrics used in assessing Good Computing Reports, In-Depth Case Study Analyses, and Engineering Ethics Midterm Exams and Computer Ethics Midterm Essay Exams. Students will find these rubrics useful in studying for exams. Faculty members can use these rubrics as templates for developing rubrics of their own. This module is being developed as a part of an NSF-funded project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

Key to Links

- The first link connects to the Ethics Bowl assignment for engineering and business students. It corresponds with the Ethics Bowl rubric displayed below.
- The second link connects to the module on developing reports on computing socio-technical systems. It outlines an assignment where computing students carry out an analysis of the impact of a computing system on a given socio-technical system. A rubric to this activity used in computer ethics classes is provided below.
- The third link to the Three Frameworks module corresponds to a rubric below that examines how well students deploy the frameworks on decision-making and problem-solving outlined by this module.
- The final link to Computing Cases provides the reader with access to Chuck Huff's helpful advice on how to write and use rubrics in the context of teaching computer ethics.

Introduction

This module provides a range of assessment rubrics used in classes on engineering and computer ethics. Rubrics will help you understand the standards that will be used to assess your writing in essay exams and group

projects. They also help your instructor stay focused on the same set of standards when assessing the work of the class. Each rubric describes what counts as exceptional writing, writing that meets expectations, and writing that falls short of expectations in a series of explicit ways. The midterm rubrics break this down for each question. The final project rubrics describe the major parts of the assignment and then break down each part according to exceptional, adequate, and less than adequate. These rubrics will help you to understand what is expected of you as you carry out the assignment, provide a useful study guide for the activity, and familiarize you with how your instructor has assessed your work.

Course Syllabi

Syllabus for Environments of the Organization

<https://cnx.org/content/m14059/>

Syllabus for Business, Society, and Government

<https://cnx.org/content/m14059/>

Business Ethics Course Syllabus

<https://cnx.org/content/m14059/>

Course Requirements,
Timeline, and Links

Business Ethics Syllabus, Spring 2008

<https://cnx.org/content/m14059/>

This figure contains the
course syllabus for
business ethics for spring
semester 2008.

Business Ethics Syllabus Presentation

<https://cnx.org/content/m14059/>

Clicking on this figure will open the presentation given on the first day of class in Business Ethics, Fall 2007. It summarizes the course objectives, grading events, and also provides a PowerPoint slide of the College of Business Administration's Statement of Values.

Rubrics Used in Connexions Modules Published by Author

Ethical Theory Rubric

This first rubric assesses essays that seek to integrate ethical theory into problem solving. It looks at a rights based approach consistent with deontology, a consequentialist approach consistent with utilitarianism, and virtue ethics. The overall context is a question presenting a decision scenario followed by possible solutions. The point of the essay is to evaluate a solution in terms of a given ethical theory.

Ethical Theory Integration Rubric

<https://cnx.org/content/m14059/>

This rubric breaks down the assessment of an essay designed to integrate the ethical theories of deontology, utilitarianism, and virtue into a decision-making scenario.

Decision-Making / Problem-Solving Rubric

This next rubric assesses essays that integrate ethical considerations into decision making by means of three tests, reversibility, harm/beneficence, and public identification. The tests can be used as guides in designing ethical solutions or they can be used to evaluate decision alternatives to the problem raised in an ethics case or scenario. Each theory partially encapsulates an ethical approach: reversibility encapsulates deontology, harm/beneficence utilitarianism, and public identification virtue ethics. The rubric provides students with pitfalls associated with using each test and also assesses their set up of the test, i.e., how well they build a context for analysis.

Integrating Ethics into Decision-Making through Ethics Tests

<https://cnx.org/content/m14059/>

Attached is a rubric in MSWord that assesses essays that seek to integrate ethical considerations into decision-making by means of the ethics tests of reversibility, harm/beneficence, and public identification.

Ethics Bowl Follow-Up Exercise Rubric

Student teams in Engineering Ethics at UPRM compete in two Ethics Bowls where they are required to make a decision or defend an ethical stance evoked by a case study. Following the Ethics Bowl, each group is responsible for preparing an in-depth case analysis on one of the two cases they debated in the competition. The following rubric identifies ten components of this assignment, assigns points to each, and provides feedback on what is less than adequate, adequate, and exceptional. This rubric has been used for several years to evaluate these group projects

In-Depth Case Analysis Rubric

<https://cnx.org/content/m14059/>

This rubric will be used to assess a final, group written, in-depth case analysis. It includes the three frameworks referenced in the supplemental link provided above.

Rubric for Good Computing / Social Impact Statements Reports

This rubric provides assessment criteria for the Good Computing Report activity that is based on the Social Impact Statement Analysis described by Chuck Huff at www.computingcases.org. (See link) Students take a major computing system, construct the socio-technical system which forms its context, and look for potential problems that stem from value mismatches between the computing system and its surrounding socio-technical context. The rubric characterizes less than adequate, adequate, and exceptional student Good Computing Reports.

Good Computing Report Rubric

<https://cnx.org/content/m14059/>

This figure provides the rubric used to assess Good Computing Reports in Computer Ethics classes.

[Computing Cases provides a description of a Social Impact Statement report that is closely related to the Good Computing Report. Value material can be accessed by looking at the components of a Socio-Technical System and how to construct a Socio-Technical System Analysis.](#)

Business Ethics Midterm Rubric Spring 2008

<https://cnx.org/content/m14059/>

Clicking on this link will
open the rubric for the
business ethics midterm
exam for spring 2008.

Insert paragraph text here.

Study Materials for Business Ethics

This section provides models for those who would find the Jeopardy game format useful for helping students learn concepts in business ethics and the environments of the organization. It incorporates material from modules in the Business Course and from Business Ethics and Society, a textbook written by Anne Lawrence and James Weber and published by McGraw-Hill. Thanks to elainefitzgerald.com for the Jeopardy template.

Jeopardy: Business Concepts and Frameworks

<https://cnx.org/content/m14059/> <https://cnx.org/content/m14059/>

Privacy, Property, Free Speech, Responsibility

<https://cnx.org/content/m14059/>

Jeopardy for EO Second Exam

<https://cnx.org/content/m14059/>

Jeopardy 5

<https://cnx.org/content/m14059/>

Jeopardy 6

<https://cnx.org/content/m14059/>

Jeopardy7

<https://cnx.org/content/m14059/>

Ethics Bowl for Environments of the Organization

This module describes how to incorporate ethical considerations into business cases through an Ethics Bowl competition and a written follow-up analysis. It assumes knowledge of ethics tests and a values framework. By working through the competition and follow-up activities, students gain an invaluable opportunity to practice skills in ethical problem solving, communication, and team work. This module makes use of materials provided through the Ethics Bowl competition held annually at meetings of the Association for Practical and Professional Ethics. Information on the national competition, devised by Dr. Robert Ladenson, can be found at the website of the Center for the Study of Ethics in the Professions, www.iit.edu/departments/csep. This module is being developed as a part of an NSF-funded project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

Module Introduction

This module, written for students in "The Environments of the Organization," provides students with a structured exercise for incorporating the feedback they have received on their **Ethics Bowl** presentation. The Ethics Bowl provides students with the opportunity to practice integrating ethical and social considerations into an analysis of real world and realistic business cases. While it resembles a debate format, it is actually much more. First, a presenting team telescopes its case analysis into a 7 minute presentation. Another team comments on the presenting team's presentation, an activity that requires active listening rather than rebuttal skills. The presenting team concludes by responding to the commentary (which requires further clarification of their position) and answering questions put by the class and the judges. An in depth written analysis gives students a chance to reflect on their Ethics Bowl experience and respond to the questions and comments of their classmates and teachers. The group self evaluation provides students with an opportunity to reflect on the challenges it faced throughout the Ethics Bowl and assess the practices it developed to respond to these challenges. This module describes the Ethics Bowl, provides suggestions for carrying out the presentation and commentary, and sets forth templates for the in depth analysis and group self-evaluation. A media file allows students to download the cases for the

current semester for study and preparation. More information on the Engineering Ethics Bowl carried out at UPRM can be found in Jose A Cruz-Cruz, William J. Frey, and Halley D. Sanchez, "The Ethics Bowl in Engineering Ethics at the University of Puerto Rico - Mayaguez" in Teaching Ethics 4(3): 15-32.

Toysmart

Toysmart Scenarios

David Lord's Decision

- You are David Lord, a former employee of Holt Educational Outlet, a manufacturer of educational toys located in Waltham, Mass. Recently, you have joined with Stan Fung of Zero Stage Capital, a venture capital firm to buy out Holt Educational Outline. After changing its name to Toysmart, you and Fung plan to transform this brick and mortar manufacturer of educational toys into an online firm that will link customers to a vast catalogue of educational, high quality toys. Designing a website to draw in toy customers, linking to information on available toys, setting up a toy distribution and shipping system, and implementing features that allow for safe and secure online toy purchases will require considerable financing. But, riding the crest of the dot-com boom, you have two promising options. First, a venture capital firm has offered you \$20,000,000 for website development, publicity, and other services. Second, Disney has offered the same amount for financing, but has added to it an additional \$25,000,000 in advertising support. Disney has a formidable reputation in this market, a reputation which you can use to trampoline Toysmart into prominence in the growing market in educational toys. However, Disney also has a reputation of micro-managing its partners. Develop a plan for financing your new dot-com.
- What are Toysmart values? What are Disney values? Would Disney respect Toysmart's values?
- What synergies could result from working with Disney? For example, could you share information on customers? You could feed your customer profiles to Disney in exchange for their customer profiles.

What kind of data managing technology would be required for this?
What ethical problems could arise from transferring customer identifying information to third parties?

- What kind of commitment would you be willing to make to Disney in terms of product and sales? How should Disney reciprocate? For example, how long should they stick with you through sales that fall short of projections?

Blackstone's Decision

- You work for Blackstone, "an 18-person software business." You have been asked by Toysmart to provide software the following functions: (1) designing a webpage that would attract customers and communicate Toysmart Values, (2) advise Toysmart on its privacy and data security policy including whether to register with an online trust, security measures to protect customer data during online transactions, and measures to prevent unauthorized access to customer data while stored, and (3) a comprehensive online catalogue that would provide customers with access to educational toys from a variety of small business manufacturers. An example of small toy manufacturers to which Toysmart should be linked is Brio Corporation which manufactures wooden toys such as blocks, trains, and trucks. Develop general recommendations for Toysmart around these three areas.
- (Information for this scenario comes from Laura Lorek, "When Toysmart Broke," <http://www.zdnet.com/eweek/stories/general/0,1101,2612962,00.html>. Accessed July 16, 2001.)
- Toysmart is a fairly new dot-com. While it is supported by Disney, it is still a risky venture. Should you ask them for advance payment for whatever services you render? What kind of policies does your company have for identifying and assessing financial risk?
- What kind of privacy and data security policy should you recommend to Toysmart? What kind of values come into conflict when a company like Toysmart develops and implements privacy and data security measures? (Use your STS description to answer this question.)
- Should Toysmart become bankrupt, their data base would turn into a valuable asset. What recommendations should you make to help

Toysmart plan around this possibility? What values come into conflict when planning to dispose of assets during bankruptcy proceedings? What kind of obligations does a company take on during its operation that continue even after it has become bankrupt?

- Using the link provided with this module, visit the TRUSTe website and find its white paper on developing a privacy policy. Evaluate this privacy policy for Toysmart. What benefits can a strong privacy policy bring to a dot-com? Should Toysmart work to qualify to display the TRUSTe seal on its website? Examine TRUSTe procedures for transferring confidential customer PII to third parties? What obligations will this create? Would this over-constrain Toysmart?

Liquidating Toysmart

- You work for PAN Communications and have been providing advertising services for Toysmart. Now you find out that Toysmart has filed a Chapter 11 bankruptcy, and it has an outstanding debt to your company for \$171,390. As a part of this filing procedure, Toysmart has reported its assets at \$10,500,000 with debts of \$29,000,000. Toysmart creditors, including PAN Communications, have petitioned the Office of the United States Trustee for a "Creditors' Committee Solicitation Form." This will allow for the formation of a committee composed of Toysmart creditors who decide on how the assets of the bankrupt firm will be distributed. You, because of your knowledge of bankruptcy and accounting procedures, have been asked to represent your company on this committee. This bleak situation is somewhat remedied by the customer data base that Toysmart compiled during its operation. It contains profiles of the PII (personal identifying information) of 260,000 individuals. Because selling educational toys is profitable, there is a good chance that this data base could be sold for up to \$500 a profile to a third party. Should you recommend selling this data base? Should Toysmart customers be notified of the pending transfer of their PII and, if so, how should they be notified?
- Constraints: (a). As a member of the Creditors' Committee, you have a fiduciary duty to Toysmart creditors in working to distribute fairly the remaining Toysmart assets. This would, all things being equal, lead to recommending selling the Toysmart customer data base. (b) There are

some provisions in the bankruptcy code that may require or allow overriding fiduciary duties given prior legal commitments made by Toysmart. These commitments, in the form of strong privacy guarantees made to customers by Toysmart on its webpage, may constitute an "executory contract." See the Legal Trail table in the Toysmart case narrative and also Darren M. Nashelsky, "On-Line Privacy Collides With Bankruptcy Creditors," New York Law Journal, New York Law Publishing Company, August 28, 2000. (c) Finally, Nashelsky makes an interesting argument. While deontological considerations would require setting aside creditor interests and honoring Toysmart privacy promises, a justice-based argument would recommend a compromise. Bankruptcy proceedings start from the fact that harm (financial) has been done. Consequently, the important justice consideration is to distribute fairly the harms involved among the harmed parties. Harm distributions are correlated with benefit distributions. Because Toysmart customers benefited from Toysmart offerings, they should also bear a share of the harms produced when the company goes bankrupt. This requires that they allow the distribution of their PII under certain conditions.

- How do you balance your obligations to PAN with those to other Toysmart creditors as a member of the Creditors' Committee?
- How should you approach the conflict between honoring Toysmart promises and carrying out Creditor Committee fiduciary duties? Do you agree with Nashelsky's argument characterized above?
- Should the Bankruptcy Code be changed to reflect issues such as these? Should privacy promises be considered an "executory contract" that overrides the duty to fairly and exhaustively distribute a company's assets?
- Finally, what do you think about the FTC's recommendation? The Bankruptcy Court's response? The final accommodation between Toysmart and Buena Vista Toy Company?

Toysmart Arguments

Construct arguments for and against the selling of Toysmart's customer data base to third parties. Your arguments should consider the perspectives of both the customers (whose personal identifying information forms the

content of this data base) and Toysmart's creditors (who are responsible to their stockholders for recovering Toysmart's debt).

Toysmart Group Summary

- Make and defend a decision to each Toysmart decision point. Use the ethics and feasibility tests.
- Do a socio-technical system table on Toysmart? How do you plan to integrate the fact that Toysmart is a cyber, not a "brick and mortar," corporation?
- Write out formulations of the Toysmart arguments outlined above.

Biomatrix

Biomatrix Decision Point

- Biomatrix Decision Point Three: How far does free speech go? You work with a public service organization devoted to the defense of free speech, both off and online. For this reason you immediately noticed a newspaper story that three individuals, Richard Costanzo, Raymond Costanzo, and Ephraim Morris, were found guilty in a summary judgment of defamation. It seems they published, under 23 pseudonyms, some 16,000 messages that made negative claims against Biomatrix and its managers that they were unable to substantiate.
- The claims made by these individuals in their emails were pretty strong:
- Biomatrix's most popular product, Synvisc, has produced significant harmful side effects and the company has taken wrongful measures to suppress this information. Synvisc is a manufactured substance that resembles the natural fluids that lubricate knee movements. These fluids disappear with age producing a condition called osteoarthritis. Synvisc has been presented as a highly promising treatment for this problem.
- They also accuse Biomatrix of covering up that fact that they are targets of potentially damaging lawsuits.
- These three individuals, who style themselves the BXM Police, also accuse the company of covering up negative, harmful information

about their upcoming merger with Genzyme. The messages claim that inside information reveals that the merger will never take place.

- The BXM police also accuse Biomatrix top management of having committed war crimes and acts of sexual harassment.
- During pre-trial depositions, the accused were unable to substantiate any of these claims. While the motives for posting these messages have never been made clear three stand out: revenge, short selling, and the perception that rules of defamation did not apply in cyber space. You have been asked by your organization to contact the BXM Police and propose that they appeal this decision. You and your organization think that there are strong legal and ethical arguments, based on the right to free speech, that need to be put forth in this case. Your job in this decision point is to set forth these legal and moral arguments. In other words, construct a comprehensive defense for the BXM Police.
- Important Considerations:
- EPIC (Electric Privacy Information Center) and the ACLU (American Civil Liberties Union) have presented an amici curiae (friend of the court brief) outlining their concerns about the use of John Doe lawsuits to pierce online anonymity. Their concerns is that the same procedures could discourage whistle-blowing or lead to retaliation against whistle-blowers and other dissenters.
- Perhaps the strongest case for Free Speech is made by John Stuart Mill in On Liberty. (a) Censorship is wrong when the opinion is true because this suppresses the truth. (b) Censorship is wrong when the opinion is partially true because this suppresses part of the truth. (c) In the deciding case, censorship is wrong when the opinion is false because this deprives the truth of the occasion to defend and clarify itself. Do defamation lawsuits suppress free speech?
- Did Biomatrix and its management team suffer damages as a result of the Yahoo messages? What is this damage? What evidence proves that the damage was caused by the negative speech and not something else? Who bore the burden of proof in the summary judgment against the BXM Police?
- The strongest argument the BXM Police offer for their actions is that they are not bound by rules of veracity and defamation while operating pseudonymously online. Should we be held responsible for what we

say online? In the same way that we are held responsible off line?
Doesn't Yahoo's disclaimer to readers that they should not assume that what they read is true suffice to exculpate those who post false speech?

- It has been suggested that the BXM Police were motivated by greed. Their speech was designed to lower the price of Biomatrix stock so they could profit from short selling it. Does this change your defense? There is also inconclusive evidence that they were not acting alone? Does this change your defense?

Biomatrix Argument

A John Doe lawsuit was used in the Biomatrix case to uncover the names of the BXM Police, the Biomatrix cyber slanders. Privacy interest groups argue that this represents a dangerous precedent because the same tool can be used against legitimate dissenters (such as whistle-blowers) who use anonymity to protect themselves against retaliation. Construct arguments for and against the use of John Doe lawsuits and orient your arguments around the issue of free speech.

Biomatrix Group Summary

- Identify, evaluate, and rank three solution alternatives on the Biomatrix decision point mentioned above. Use the ethics and feasibility tests.
- Prepare a socio-technical system table on Biomatrix. What role does Online Service Provider, Yahoo, play in this system? How is freedom of speech covered in your table? In the law section? As an organizational procedure? Under software, such as Yahoo Bulletin Board features?
- Outline arguments tied to freedom of speech in favor of and against the use of John Doe lawsuits.

Enron

Enron Debate Scenario

- You will find information on the Enron Case from two sources: Business and Society, 450-462 and cnx.org/content/m31972/latest. The Connexions module condenses the case into eight important points and three cautionary tales.

- Lay formulated an exciting new idea: trading energy futures, that is, deregulating the energy market and trading energy futures in the same way that agriculture futures are traded. To bring about deregulation in the energy market, Kenneth Lay became a formidable Washington lobbyist who benefitted from close ties to the Bush family (President George H. W. Bush and President George W. Bush). What are the ethical and risk implications of deregulating the energy industry and trading energy futures on the market?
- Skilling implemented a rank and yank performance evaluation system. Each Enron employee was ranked in relation to his or her coworkers. Then the bottom 15% were fired and replaced the next year by new hires. This process then continued: every year at Enron, employees are ranked and the bottom 15% yanked. The ranking process was based primarily on an adversarial procedure where your mentor advances your portfolio and a detractor pushes it back and advances that of another candidate. The process terminates when the rankers get exhausted. Skilling implemented this system because he believed in a philosophy called “Social Darwinism” where only the fittest survive. (Social Darwinism is based on a misinterpretation of Darwin’s theory of evolution.) What do you think about this personnel process both from the standpoint of Human Resources or Personnel and from an ethical standpoint?
- Enron developed "creative" accounting methods. Mark-to-market allowed them to declare future earnings expected from a project at the moment the deal is made. While good in the short term, this method quickly put Enron on an accelerating treadmill: to maintain the illusion of profitability they had to keep making deals and immediately declaring expected profits. Enron also used Special Purpose Entities to distribute risk and secure needed loans at low interest rates. SPEs were artificial corporations endowed with Enron assets like gas pipelines and energy contracts. These assets made it possible for Enron to get low interest loans and generate needed cash flow. The problem was that Enron used its stock to guarantee the loans given to the SPEs. Thus, Enron had to continually make deals to appear profitable to keep its stock value rising, and we’re back to the accelerating treadmill. Evaluate the practices of mark-to-market accounting and the use of SPEs to distribute risk and secure loans. Are these practices unethical

considered on their own terms? Ethically evaluate Enron's use of these accounting practices. Use the three ethics tests.

Enron Arguments

Enron's use of creative accounting and business tools (mark-to-market accounting and special purpose entities to distribute risk) could be termed deceptive. But Malcom Gladwell argues that Enron was not at fault for deceiving its investors. Instead of being a puzzle created when conspirators improperly conceal information, Enron was a mystery where all the needed information is publicly available but nobody has the foresight to interpret the information in the proper fashion. (Gladwell points out that a group of students at Syracuse University studied Enron and recommended selling Enron stock long before the so-called experts reached the same conclusion.) Construct arguments for and against the claim that Enron business practices were deceptive and therefore unethical. Use your ethics tests..

Enron Group Summary

- Evaluate Enron practices using your ethics and feasibility tests.
- Prepare a socio-technical system table on Enron. Go to m14025 (STSs) and make use of the STS table on power generation in Puerto Rico.
- Provide an argument for Gladwell's position that Enron was a mystery. What does this say about Enron responsibility? Provide a table for the position that Enron was a puzzle? What does this say about Enron's responsibility?

Click on Bell: Business Ethics Links Library to find Enron's code of ethics.

Nike

Nike Scenario

- Your textbook provides the following description of working conditions for a Nike suppliers located in Vietnam (p 512):
- "Workers who did not meet the aggressive production goals did not receive a bonus. Failing to meet production goals three times resulted in the worker's dismissal. Workers were sometimes permitted to work additional hours without pay to meet production quotas. Supervisors

were strict, chastising workers for excessive talking or spending too much time in the restrooms. Korean supervisors, often hampered by language and cultural barriers, sometimes resorted to hard-nosed management tactics, hitting or slapping slower workers. Other workers in need of discipline were forced to stand outside the factory for long periods in the tropical sun. The Vietnamese term for this practice was *phoi nang*, or sun-drying.” *Business and Society*, 512

- Is Nike responsible (or co-responsible) for the actions described above that were committed by its supplier? Explain your position by clarifying whether you are taking a shareholder or stakeholder view of corporate social responsibility. Then outline a plan for how should Nike respond to a supplier that engages in the practices described above?

Nike Argument

Your module on corporate social responsibility outlines two different accounts of the target and scope of responsibility. The stockholder view holds that the corporation is responsible only to its investors/owners. Diverting resources from stockholders to other parties represents, according to Milton Friedman, “taxation without representation.” On the other hand, the stakeholder view holds that the corporation as to balance different stakeholder interests and rights; the corporation is responsible to all stakeholders and must treat them equally. Werhane agrees with the stakeholder view but goes one step further; to properly understand stakeholder responsibilities, the corporate manager must imagine the corporate stakeholder complex around each stakeholder taken successively as the center. Argue for a stockholder approach to the responsibilities of Nike for the actions of its suppliers. Argue for a stakeholder approach to the responsibilities of Nike for the actions of its suppliers. Imagine the Nike stakeholder complex as it is seen from the standpoint of the Vietnamese workers depicted in the case above. How should it respond to employee treatment from this perspective?

Nike Group Summary

- Identify social responsibility responses that Nike can take toward the Vietnam-based suppliers. Evaluate them using the ethics and feasibility tests.

- Prepare a socio-technical system table of Nike. What part or parts of the STS houses the concerns of the Vietnamese workers? What changes can be made in this STS to better accommodate the basic interests of the Vietnamese employees?
- Respond to the Nike argument outlined above.

Click on Bell: Business Ethics Links Library to get information on the corporate social responsibility programs Nike has developed to respond to concerns about how suppliers treat employees.

Hughes Aircraft

Frank Saia Scenario

- Frank Saia has worked at Hughes Aircraft for a long time. Now he is faced with the most difficult decisions of his career. He has been having problems in the environmental testing phase of his microchip manufacturing plant; the detailed nature of these tests has caused Hughes to be consistently late in delivering the chips to customers.
- Because of the time pressure to deliver chips, Saia has been working to make the production of chips more efficient without losing the quality of the product. Chips are manufactured and then tested, and this provides two places where the process can bottle up. Even though you might have a perfectly fine chip on the floor of the plant, it cannot be shipped without testing. And, since there are several thousand other chips waiting to be tested, it can sit in line for a long time. Saia has devised a method that allows testers to put the important chips, the “hot parts,” ahead of the others without disrupting the flow and without losing the chips in the shuffle. He has also added a “gross leak” test that quickly tells if a chip in a sealed container is actually sealed or not. Adding this test early in the testing sequence allows environmental testing to avoid wasting time by quickly eliminating chips that would fail a more fine-grained leak test later in the sequence.
- Because environmental testing is still falling behind, Saia’s supervisors and Hughes customers are getting angry and have begun to apply pressure. Karl Reismueller, the director of the Division of

Microelectronics at Hughes, has given Saia's telephone number to several customers, whose own production lines were shut down awaiting the parts that Saia has had trouble delivering. His customers are now calling him directly to say "we're dying out here" for need of parts.

- Frank Saia has discovered that an employee under his supervision, Donald LaRue, has been skipping tests on the computer chips. Since LaRue began this practice, they have certainly been more on time in their shipments. Besides, both LaRue and Saia know that many of the "hot" parts are actually for systems in the testing phase, rather than for ones that will be put into active use. So testing the chips for long-term durability that go into these systems seems unnecessary. Still, LaRue was caught by Quality Control skipping a test, and now Saia needs to make a decision. Upper management has provided no guidance; they simply told him to "handle it" and to keep the parts on time.
- He can't let LaRue continue skipping tests, or at least he shouldn't let this skipping go unsupervised. LaRue is a good employee, but he doesn't have the science background to know which tests would do the least damage if they were skipped. He could work with LaRue and help him figure out the best tests to skip so the least harm is done. But getting directly involved in skipping the tests would mean violating company policy and federal law.

Margaret Goodearl Scenario

- supervisor, Donald LaRue, is also the current supervisor for environmental testing. The group that LaRue and Goodearl together oversee test the chips that Hughes makes in order to determine that they would survive under the drastic environmental conditions they will likely face.
- Rigorous testing of the chips is the ideal, but some chips (the hot chips) get in line ahead of others. Goodearl has found out that over the last several months, many of these tests are being skipped. The reason: Hughes has fallen behind in the production schedule and Hughes upper management and Hughes customers have been applying pressure to get chip production and testing back on schedule. Moreover, LaRue and others feel that skipping certain tests doesn't matter, since many of

these chips are being used in systems that are in the testing phase, rather than ones that will be put into active use.

- A few months after Margaret Goodearl started her new position, she was presented with a difficult problem. One of the “girls” (the women and men in Environmental Testing at Hughes), Lisa Lightner, came to her desk crying. She was in tears and trembling because Donald LaRue had forcefully insisted that she pass a chip that she was sure had failed the test she was running.
- Lightner ran the hermeticity test on the chips. The chips are enclosed in a metal container, and one of the questions is whether the seal to that container leaks. From her test, she is sure that the chip is a “leaker”—the seal is not airtight so that water and corrosion will seep in and eventually damage the chip. She has come to Goodearl for advice. Should she do what LaRue wants and pass a chip she knows is a leaker?

Hughes Argument

Margaret Goodearl problem could be specified as how to carry out effective dissent within the chip manufacture division at Hughes Aircraft. What are the different ways in which employees can disagree with decisions made by their supervisors? Construct arguments for and against whistle-blowing as the most ethical and effective way for Goodearl to manifest her concerns with LaRue’s test skipping. Be sure to take into account the harms of whistle-blowing to the whistle-blower, the target of the whistle-blowing, and those who become “collateral damage” such as the whistle-blower’s coworkers.

Hughes Group Summary

- Make a decision from Goodearl's perspective and justify it using the ethics and feasibility tests.
- Do a socio-technical system table on Hughes. You may want to respond to the one Huff does at ComputingCases.org. "Procedures" is an important category here. Can you guess why?
- Respond to the Hughes argument section by offering arguments for and against whistle-blowing. Again, the website, Computing Cases, is helpful here. Be sure to give the material from the IEEE on carrying out dissent a careful look.

Therac-25

Fritz Hager's Decision Point

- Therac-25 was a new generation medical linear accelerator introduced in 1983 for treating cancer. It incorporated the most recent computer control equipment. Therac-25's computerization made the laborious process of machine setup much easier for operators, and thus allowed them to spend minimal time in setting up the equipment. In addition to making setup easier, the computer also monitored the machine for safety. With the advent of computer control, hardware based safety mechanisms were transferred to the software. Hospitals were told that the Therac-25 medical linear accelerator had "so many safety mechanisms" that it was "virtually impossible" to overdose a patient.
- You are Fritz Hager a hospital physicist working for the East Texas Cancer Center in Tyler, Texas. It has been brought to your attention that there is a strong probability that a patient—possibly two—has received an overdose of radiation during treatment with the Therac-25 medical linear accelerator. Upon notifying your supervisors, East Texas Cancer Center officials, you have been told that you cannot talk with anyone outside of the hospital about this situation. This even includes interviewing the first person who suffered the possible overdose. You have three responsibilities in this situation: (1) as hospital physicist you are ultimately responsibility for any untoward results produced through the operation of the Therac-25 machine; (2) you are responsible for finding out what happened and, if the patient received an overdose, what caused this overdose; (3) you are also legally responsible, as an employee of the East Texas Cancer Center, for acting as the loyal agent of your supervisors who have told you unequivocally not to communicate with any outsiders concerning this issue. What should you do?
- Design a course of action from Hager's perspective given the situation described in the decision scenario. First, broadly define Hager's problem and explore its ethical dimensions. Second, design a course of action for Hager that addresses the responsibilities mentioned just above. Is it possible to carry out the first two responsibilities while

keeping the matter “in house?” Finally, include in your presentation a discussion of the values that you feel your solution embodies.

- (To help you with this scenario please consult with the interview with Fritz Hager at Computing Cases.)

Therac-25 Scenario: Are Operators Between a Rock and a Hard Place?

- You have been operating a Therac-25 unit for several months now. Even though the machine is new, rumors of problems have started to flow in from other places. From your standpoint, the machine is quite nice. For example, you are able to treat patients faster because the machine’s software automatically aligns the machine’s magnets and beams to produce the right kind of radiation treatment. One machine combines three functions: x-ray treatment, electron treatment, and a harmless beam that lets you target the machine on exactly the right place on the patient.
- Four issues concern you. First, the newest Therac machine has dismantled many hardware safety controls and replaced them with software controls. AECL assures you that this is safer because hardware is more reliable. But, as a hands-on kind of person, you like to have more control over the configuration and operation of the machine.
- Second, the patient and the machine are located in one room, but you carry out the radiation treatment from another room. This is for your safety, since you would be over exposed to radiation if you were to stay with all of your patients during their treatment. But your ability to monitor the treatment and the patient’s health depends on the audio and video monitoring systems. You know from past experience at the hospital, that these systems break down and the hospital maintenance staff is sometimes slow in getting around to repairs. You should decline to treat patients when these monitoring systems are not functioning but it is difficult for an operator to press this point with supervisors.
- Third, while initially the quicker patient turnover time allowed you to spend more time with each patient, there is now subtle but increasing pressure to fill in the additional time by treating more patients. You understand the hospital’s concern to carry out treatments as efficiently

and economically as possible. But what kind of arguments can you give to your supervisors for treating fewer patients and spending more time with each? Is it your job to advocate for patient interests in this context?

- Finally, the computer interface with the operator simply provides inadequate information. When a treatment pause occurs, only a generic error message flashes on the screen. It would, in your opinion, be better if you knew the specific reason for the treatment pause. Furthermore, many of your counterparts have found ways to override the pauses. This saves time and money since resetting the machine and reentering the data takes up valuable time. Nevertheless, since you do not know the reason behind the pause, how do you know that the pause is not due to some dangerous machine state like an inadequate focusing of the photon beam? Is this a problem you need to bring to the attention of your supervisors?
- Your hospital administration is holding a meeting. Fifteen minutes has been allocated for a report from you and the other Therac-25 operators on how the machine has been performing to date. Prepare a short informal presentation that makes these concerns known to the administrators. Be sure to deal with the problems mentioned above but also take care to define your problems in terms your administrators would find clear and persuasive. For each problem suggest some solutions, say 2 or 3. Evaluate these solutions in ethical and non-ethical terms. Rank them.

Therac-25 Arguments

From both Hager's and the operators' standpoints, the decision must be made whether to recommend the continued operation of the Therac-25 units while investigating into the complaints of possible machine-caused radiation overdoses or to stop operating the units until the cause of the complaints of radiation overdose are identified and verified. Construct an argument for continued operation of the units while investigating. Construct another argument that all operation should cease until all the complaints are thoroughly investigated.

Where Does Your Group Find Its Case?

1. To prepare for the Ethics Bowl, your group will be given a set of 10 to 15 short scenarios.
2. At the beginning of the competition, your group will draw from a hat the case you will be presenting. Accompanying this case is a question. Your presentation will be tasked with answering this question in the context of the case.
3. This case will also serve as the subject and focus of your written group analysis due on the final exam date during the final exam time period. Your goal in your written analysis is to rework your answer to the question incorporating the feedback you received during the commentary of the other team and the questions asked by the judges.
4. A template below will provide a step by step process for carrying out this process.

Activity	Description	Checklist
Case Summary	A short, concise summary of your case. This should be more than a translation or paraphrasing of the case.	
Recapitulation of Competition	A detailed account of the presentation your group gave during the Ethics Bowl that includes the following: (a) a clear, comprehensive, and concise summary of the other team's commentary; (b) an account of how your team responded to the other team's commentary; (c) an itemization of the questions asked and the answers composed by your	

	team during the competition; (d) a reasoned statement of how your group responded to this feedback as well as the scoring of the competition.	
Refined Analysis	A revised analysis of the case and question that incorporates the other team's commentary and the judge's response.	
Multiple Viewpoints	A "devil's advocate" section consisting of a clear, full, and strong statement of a position opposed to that of your team's. This could incorporate the comments of the other team and judges or result from your group's own deliberation	
Reaffirmation and Conclusion	A section defending your group's position against the devil's advocate position and concluding your case analysis.	

In-Depth Group Case Analysis

Activity	Description	Checklist
Goal Restatement	Restate the Ethical and Practical Goals that your group developed at the beginning of its formation.	

<p>Goal Assessment</p>	<p>Provide a careful, documented assessment of your group’s success in meeting these goals. (Don’t just assert that “Our group successfully realized justice in all its activities this semester.” How did your group characterize justice in the context of its work? What specific activities did the group carry out to realize this value? What, among these activities, worked and what did not work?</p>	
<p>Discussion of Obstacles</p>	<p>Identify obstacles, shortcomings or failures that you group experienced during the semester. How did these arise? Why did they arise? How did you respond to them? Did your response work? What did you learn from this experience?</p>	
<p>Plan Assessment</p>	<p>Assess the plans you set forth in your initial report on how you intended to realize values and avoid pitfalls. How did these work? Did you stick to your plans or did you find it necessary to change or abandon them in the face of challenges?</p>	
<p>Procedure Assessment</p>	<p>Discuss your group’s procedures and practices? How did you divide and allocate work tasks? How did you reach consensus on difficult issues? How did you ensure that all members were respected and allowed significant and meaningful participation? What worked and</p>	

	<p>what did not work with respect to these procedures? Will you repeat them in the future? Would you recommend these procedures as best practices to future groups?</p>	
<p>Lessons Learned</p>	<p>What did you learn from your experience working as a team this semester? What will require further reflection and thought? In other words, conclude your self-evaluation with a statement that summarizes your experience working together as a team this semester</p>	

Final Group Self-Evaluation

In-Depth, Written Analysis: Step by Step

Due Date

You will turn in your group written analyzes and group self evaluations during the final exam period. This date is set by the university and announced two thirds of the way through the semester.

What is Required?

1. A short, concise summary of your case. This should be more than a translation or paraphrasing of the case.
2. A detailed account of the presentation your group gave during the Ethics Bowl that includes the following: (a) a clear, comprehensive, and concise summary of the other team's commentary; (b) an account of how your team responded to the other team's commentary; (c) an itemization of the questions asked and the answers composed by your team during the competition; (d) a reasoned statement of how your group responded to this feedback as well as the scoring of the competition.
3. A revised analysis of the case and question that incorporates the other team's commentary and the judge's response.

4. A "devil's advocate" section consisting of a clear, full, and strong statement of a position opposed to that of your team's. This could incorporate the comments of the other team and judges or result from your group's own deliberation.
5. A response to the devil's advocate position referring to your revised presentation.

Ethics Bowl Rules and Structure

1. The moderator will begin the competition by flipping a coin to determine which team will present first. If the team that calls wins the toss, they choose whether they or the other team go first.
2. **First Class:** (A) Team 1 will have one minute to consult and seven minutes to give its initial presentation. The presentation must be tied to the question/task given to it by the moderator. (B) Team 2 has a minute to consult and seven minutes to give a commentary on Team 1's presentation. This is much more than rebuttal or criticism; Team 2 can add to, agree with or disagree with all or part of Team 1's presentation. Team 2 may close its commentary by posing a question to Team 1. (C) Team 1 then has a minute to consult and five minutes to respond to Team 2's Commentary. (D) Team 1 will answer questions posed by the judges and the peer review teams for 15 minutes. Each participant formulates a question and is allowed a quick follow-up for clarification. (E)The judges and peer review teams will score the first half of the competition but not announce the results.
3. **Second Class:** The same procedure will occur while reversing the roles between Teams 1 and 2. Thus, team 2 will present, team 1 comment, team 2 respond, and then team 2 will answer questions from the judges. The peer review panels will add the scores for the second part of the competition but will hold off on announcing the results until Friday's class.
4. Debating teams may **trade minutes** from consulting to presenting. For example, Team 1 may decide to take two minutes to consult when given their case and task. This will mean that they have 6 minutes remaining in which to present, not seven.
5. **Nota Bene:** Debating teams and Peer Review teams are not allowed to bring notes into the competition. You will be provided with paper to

- take notes once the competition starts.
6. Even though the national Ethics Bowl competition allows only one presenter, debating teams will be allowed to "pass the baton." When one person finishes speaking, another can step into his or her place. It is absolutely forbidden that more than one person speak at a time. Also, the competing team's speaking time is limited to its commentary. Once that is over, they are instructed to listen quietly. Infractions will be followed first by a warning. Second infractions will result in points being subtracted.

Competition Time Line

Competition Time Line

1. Team 1 Presentation: One minute to consult, seven minutes to present.
2. Team 2 Commentary: One minute to consult, seven minutes to present.
3. Team 1 Response to Commentary: One minute to consult, five minutes to respond.
4. The question and answer session between Team 1 and the judges will last 15 minutes with the clock running. Each judge is permitted to ask a question and a short follow-up.
5. In the second round, the time line is the same while the debating teams change roles.

Advice for Presenting Teams

- Tell us what you are going to do, do it, and then tell us what you have done. In other words, start your presentation with a summary, then proceed to explain the parts summarized in more detail, and conclude with another summary. This will help the listening audience understand what you are trying to do.
- Be professional, formal, and courteous. Address yourself to the other team and to the judges. Some presenters stand facing the judges and other team when delivering the initial presentation.
- Be sure to address the scoring criteria in your presentation, commentary, response to commentary, and answers to judges' questions. What do you and your team understand by intelligibility,

ethical relevance, ethical irrelevance, and moral imagination/creativity? Take time to listen to the other team and the judges to gauge whether they picked up on how your team has addressed the criteria. If they miss aspects, repeat them later in the competition. Don't be afraid to use phrases such as "As we said earlier in the presentation or in our commentary...." During the commentary and the question and answer session you will find crucial clues into whether others have understood you as you wished to be understood.

- Be sure to thank the judges, other team, audience, and moderators before and after the competition. Such formalities make it possible to penetrate more deeply into the practices of civility and reasonableness.
- Relax and have fun! You may not have the opportunity to say everything you want to say. One of the purposes behind this competition is to help you see just how hard it is to advocate for ethical positions. We almost always have to do so under serious constraints such as time limits. Also, remember that you have other forums for "getting it said," namely, your group self evaluation and your in-depth case analysis. In these places you will be able to discuss these issues in more depth.

Advice for Commenting Teams

- During the commentary, you and your team need to show that you have thought carefully about the case and question and that you have understood and assessed the presentation of the other team.
- This could be demonstrated by a point by point rebuttal of the other team. But this is not necessary and not always advisable.
- You may agree with the presenting team. Feel free to say so but then go onto say why by giving reasons that go beyond those offered by the presenting team.
- You may agree with the presenting team but base your agreement on different reasons. Describe your agreement and then go onto explain your different reasons and offer grounds for taking these additional reasons into account.
- You may partially agree with the presenting team. State where you agree and why. Then go on to clarify and justify points of

disagreement.

- To make your point, use ethical considerations such as the tests (harm, reversibility, publicity) and the SOV values. This helps you to establish ethical irrelevance. But don't go overboard. This helps you to avoid ethical irrelevance.
- Always be courteous. Begin by thanking the presenting team. End by summarizing your commentary. Thank your audience for listening.

Templates for Presentation and Commentary

Activity	Description
Introductory Summary	In this part, quickly (1-2 minutes) restate the question and summarize your group's answer. You may even outline how you will justify your answer.
Developed Presentation	In this part, explain and justify in detail the answer to your question, making references to the original question and summary. Be sure to include ethical relevance (tests, values), avoid irrelevance, and provide a short account of how others might disagree with you.
Conclusion	Summarize your argument into 3 or 4 points. Acknowledge different points of view but summarize reasons for your own. Conclude by thanking the other team, judges, and audience.

Presentation of Case

Activity	Description>
Summary	Summarize the other team's presentation by boiling it down into 3 or 4 points. Then comment on these points highlight areas of agreement and disagreement. Be critical but also be respectful and fair in your criticism. Have you fairly represented the other team's position or have you caricatured it? Have you addressed your criticisms to the argument of the other team without personalizing them?
Conclusion	Conclude by thanking the other team and summarizing your agreement and disagreement with their key points.
Criteria	Be sure to address the four criteria in your Commentary: intelligibility, ethical relevance, ethical irrelevance, and moral imagination.

Commentary on other team's Presentation

Scoring Criteria

- **Intelligibility** includes three skills or abilities: (A) the ability to construct and compare multiple arguments representing multiple viewpoints; (B) the ability to construct arguments and provide reasons that are clear, coherent, and factually correct; (C) evidence of realizing the virtue of reasonableness by formulating and presenting value integrative solutions?
- **Integrating Ethical Relevance** includes three skills: (A) presenting positions that are clearly reversible between stakeholders; (B) identifying and weighing key consequences of positions considered; (C) developing positions that integrate values like integrity, responsibility, reasonableness, honesty, humility, and justice.
- **Avoiding ethical irrelevance** involves focusing your comments on those aspects of the case that are directly relevant to the ethical import

of the case and the question. Complicating the presentation with commentary on legal, political, financial, or technical aspects of the case can pull your argument off its tracks unless you clearly show the audience how these matters relate to the ethical aspects of the case and question.

- **Moral Imagination and Creativity** demonstrate four skill sets: (A) ability to clearly formulate and frame ethical issues and problems; (B) ability to provide multiple framings of a given situation; (C) ability to identify and integrate conflicting stakeholders and stakes; (D) ability to generate solutions and positions that are non-obvious, i.e., go beyond what is given in the situation.

Format For In-Depth Analysis

1. Group, team-written projects are to be 4-5 pages in length, double spaced, with standard 1-inch margins, and typewritten. This does not include documentation, appendices, and other notes.

It is essential that you carefully and fully document the resources that you have consulted. The most direct way to do this is to include numbered entries in a concluding section entitled, "Works Cited". These entries should provide complete bibliographical information according to standard form (Chicago Manual of Style or the MLA Manual of Style). Then insert the number of the entry in parenthesis in the text next to the passage that is based on it. (Example: "The self is a relation that relates itself to its own self..." (4) The number "4" refers to the forth item in the "Works Cited" section at the end of your paper.)

- Quoting directly from other sources without documenting (footnote or bibliography) and/or without using quotation marks. Claiming that this is an appendix will not excuse this action. Claiming ignorance will not excuse this action.
- Using the ideas or work of others without giving due credit or proper acknowledgment. "Proper acknowledgment", in this context, requires a standard bibliographical reference and the use of quotation marks if the material is being directly quoted.

- If your paper relies exclusively or primarily on extensively quoted materials or materials closely paraphrased from the work of others, then it will not be credited as your work even if you document it. To make it your own, you have to summarize it in your own words, analyze it, justify it, or criticize it.
- You will not be credited for material that you translate from English to Spanish unless you add to it something substantial of your own.
- In general, what you appropriate from another source must be properly digested, analyzed, and expressed in your own words. If you have any questions on this, please ask me.
- Any plagiarized document—one which violates the above rules—will be given a zero. You will be given a chance to make this up, and the grade on the make-up project will be averaged in with the zero given to the plagiarized document. Since this is a group grade, everyone in the group will be treated the same, even though the plagiarizer may be only one person. Each member of the group is responsible to assure that other members do not plagiarize in the name of the group. (Since the due date for the written project is late in the semester, this will probably require that I give the entire group, i.e., all members, an Incomplete.) Each member of the group will be held individually responsible in the above-described manner for the final content of the written report.

The usual criteria concerning formal presentations apply when competing in the Ethics Bowl. Dress professionally.

You may write your group, team-written project in either Spanish or English.

All competitions will take place in the regular classroom and be conducted in Spanish.

Media Files Beginning Spring 2007

These media files provide information on the ethics bowl and the follow-up activities including individual decision point summaries, in-depth case analysis, and group self-evaluation. They have been integrated into the

Business Ethics course during the Spring semester, 2008 and will apply from this date on into the future.

Team Member Evaluation Form

<https://cnx.org/content/m21191/>

This file contains the team member rating sheet which each group member must fill out and turn in with his or her group project.

Final Project and Group Self-Evaluation Rubrics

<https://cnx.org/content/m21191/>

This rubric will be used to grade the in-depth case analysis, the group self-evaluation, and the Ethics Bowl case summaries.

Basic Moral Concepts for Ethics Bowl

<https://cnx.org/content/m21191/>

Clicking on this figure will download the basic moral concepts that you will be integrating into the ethics bowl and your final in-depth case analysis. You will be asked to show how you worked to integrate these concepts in your group self-evaluation.

Intermediate Moral Concepts for Ethics Bowl

<https://cnx.org/content/m21191/>

Clicking on this future will open a table that summarizes the intermediate moral concepts that are at play in the four cases that are being used in the Ethics Bowl: Hughes, Therac, Toysmart, and Biomatrix.

Ethics Bowl Cases for ADMI 4016: Environment of the Organization

<https://cnx.org/content/m21191/>

Team 1 Score Sheet

<https://cnx.org/content/m21191/>

Team 2 Score Sheet

<https://cnx.org/content/m21191/>

Memo to 4016

<https://cnx.org/content/m21191/>

Nota Bene

- After the Ethics Bowl, I will provide the class with general feedback and presentations on how to prepare the final project. When you submit your final report, I will be looking for how you responded to my comments and suggestions and to the comments and suggestions of the judges and the class.
- Attendance is mandatory for all Ethics Bowl competitions. This is important because you will help one another by the comments and discussions that are generated by the presentations. Students not competing need to listen actively and respectfully to the presenting

Módulo para Instructores -- El Tazón de la Ética Para Ambientes de la Organización

Este módulo para instructores ha sido desarrollado para ayudar aquellos que se interesen por enseñar el módulo de estudiantes, "Ethics Bowl for Environments of the Organization" (m21191)

Módulo para Instructor/a

Título del módulo de estudiantes: El Tazón de la Ética para Ambientes de la Organización (m21191)

I. Resumen

Las actividades que se sugieren en este módulo proveen a los estudiantes un ambiente de aprendizaje colaborativo en donde existe una continua discusión, análisis y toma de decisiones éticas. Las actividades se basan en análisis de casos reales en el mundo de los negocios. Este módulo asume que los estudiantes tengan conocimiento sobre: Pruebas de Ética y el valor de los Marcos de Referencia para la toma de decisiones. Dichos temas se discuten en el módulo titulado "Three Frameworks for Ethical Decisions", publicado en Connexions®. Los estudiantes tendrán la oportunidad de incorporar consideraciones éticas para defender sus puntos de vista. Distintos ejercicios en forma de debate serán realizados por los estudiantes para la aplicación de análisis y toma de decisiones éticas en el ambiente de las organizaciones. Los estudiantes tendrán acceso a los diferentes casos reales en los enlaces electrónicos que se encuentran en el módulo, de manera que, podrán estudiarlos y seguir las instrucciones para llevar a cabo el debate de una forma ordenada y que cumpla con los objetivos. Este módulo se dirige a ofrecer una calidad memorable en la enseñanza de los estudiantes.

II. Objetivos

- Ofrecer a los estudiantes la oportunidad de practicar la integración de las consideraciones éticas aprendidas en otro módulo previamente estudiado: "Three Framework for Ethical Decision".
- Lograr que los estudiantes desarrollen destrezas en resolución de problemas éticos, comunicación y trabajo en equipo.
- Exponer a los estudiantes en un ambiente público (debates, presentación oral) donde desarrollen sensibilidad moral ante los

- distintos ambientes organizacionales.
- Provocar la creatividad de los estudiantes por medio del análisis y las presentaciones orales.
 - Lograr que los estudiantes vean cuan trabajoso es defender posiciones éticas.
 - Lograr que los estudiantes obtengan conocimientos por medio del aprendizaje colaborativo.

III. Estrategias Sugeridas Para cumplir con los objetivos (Se espera que estas estrategias de aprendizaje aporten al desarrollo global del estudiante.)

- Se le asigna el módulo a los estudiantes al principio de semestre o trimestre escolar, de manera que, puedan desarrollar los preparativos correspondientes en el transcurso: aprender destrezas necesarias para realizar las actividades, estudiar los casos, aprender a analizar los casos de una forma ética, organizarse como grupo, familiarizarse con las instrucciones que se ofrecen, etc.
- Los estudiantes se dividen en dos grupos: A y B. Cada grupo se divide en dos equipos: (A) 1 y 2, (B) 1 y 2.
- Un equipo realizará su presentación y defenderá su posición ante preguntas y cuestionamientos de parte del otro equipo, del instructor y de los demás estudiantes. (a) Un equipo presenta su análisis del caso en un espacio de 7 minutos; (b) el otro equipo comenta acerca de esa presentación (se requiere más destrezas de escuchar activamente que destrezas de refutación); (c) el equipo que presenta, concluye, respondiendo al comentario (requiere clarificaciones adicionales de su posición); (d) finalmente, el equipo que presenta contesta preguntas que realizan el instructor y los demás estudiantes.
- Se debe prevenir que los estudiantes compitan sin una debida preparación.
- Se debe motivar a los estudiantes a que utilicen las herramientas de análisis para tomar decisiones éticas que tienen a su disposición.

IV. Roles de los actores en la actividad del Tazón de la Ética en Ambientes de la Organización

Instructor

- Establece las reglas de la competencia (Se incluyen en el módulo de estudiantes): Límites de tiempo en la presentación, orientación a los competidores, criterios de evaluación.
- El instructor es el anfitrión de la competencia; asume una posición seria y de liderazgo; su vestimenta se relaciona con su rol de anfitrión.
- Sigue al pie de la letra las reglas de la competencia.
- Administra el tiempo para cumplir con normas establecidas.
- Estructura un diálogo, de la forma preguntas/ respuestas, con los equipos que presentan y con los demás estudiantes.
- Ofrece retroalimentación al equipo que estuvo a cargo de la presentación al final de la clase.
- Ofrece comentarios y sugerencias a los equipos que así lo ameriten.

Estudiantes (Recordemos que en esta dinámica el trabajo colaborativo entre los estudiantes es esencial para maximizar su propia enseñanza)

- Asumirán una participación activa en el proceso de los debates.
- Serán los jueces de las controversias donde se confronten los valores éticos.
- Ofrecerán estrategias que permitan remediar alguna situación ética.
- Escucharán con atención las ponencias y estarán preparados para argumentar utilizando sus conocimientos adquiridos.
- Evaluarán a sus pares por medio de unas formas que le administra su instructor/a y, además, podrán autoevaluarse. (Esto para que el instructor pueda llevar el progreso del estudiante de forma ágil y organizada)

EAC Toolkit Project

This module is a WORK-IN-PROGRESS; the author(s) may update the content as needed. Others are welcome to use this module or create a new derived module. You can COLLABORATE to improve this module by providing suggestions and/or feedback on your experiences with this module.

Funded by the National Science Foundation: "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices,"

NSF-SES-0551779

Ethics Bowl for Environments of the Organization--Instructor Module (Bilingual Version)

This module provides an English translation for "Módulo para Instructores - El Tazón de la Ética Para Ambientes de la Organización" (m33090), an Instructor Module to "Ethics Bowl for Environments of the Organization" (m21191) prepared by Ramon Ramos-Chevres who observed this activity on December 7 and 9, 2009. These modules have been developed in conjunction with the EAC Toolkit project (Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices, NSF SES 0551779).

Módulo para Instructor/a

Instructor Module

Título del módulo de estudiantes: El Tazón de la Ética para Ambientes de la Organización

Student Module Title: Ethics Bowl for Environments of the Organization

I. Resumen

Las actividades que se sugieren en este módulo proveen a los estudiantes un ambiente de aprendizaje colaborativo en donde existe una continua discusión, análisis y toma de decisiones éticas. Las actividades se basan en análisis de casos reales en el mundo de los negocios. Este módulo asume que los estudiantes tengan conocimiento sobre: Pruebas de Ética y el valor de los Marcos de Referencia para la toma de decisiones. Dichos temas se discuten en el módulo titulado "Three Frameworks for Ethical Decision-Making and Good Computing Reports"(m13757), publicado en Connexions®. Los estudiantes tendrán la oportunidad de incorporar consideraciones éticas para defender sus puntos de vista. Distintos ejercicios en forma de debate serán realizados por los estudiantes para la aplicación de análisis y toma de decisiones éticas en el ambiente de las organizaciones. Los estudiantes tendrán acceso a los diferentes casos reales en los enlaces electrónicos que se encuentran en el módulo, de manera que, podrán estudiarlos y seguir las instrucciones para llevar a cabo el debate de una forma ordenada y que cumpla con los objetivos. Este módulo se dirige a ofrecer una calidad memorable en la enseñanza de los estudiantes.

I. Summary

This module's activities provide the student with a collaborative learning environment in which there is continual discussion, analysis, and ethical decision-making. These activities are based on analysis of realistic cases in the business world. This module also assumes that students know ethics tests along with the having a sense of the value of frameworks for decision-making. These themes are discussed in another module entitled "Three Frameworks for Ethical Decision-Making and Good Computing Reports" published in Connexions®. Students will have the opportunity to employ ethical considerations to defend their points of view. Different exercises, taking the form of a debate, will be realized by the students in order to apply the skills of analysis and ethical decision making in the context of organizational environments. Students will have access to different realistic cases through hyperlinks provided in the module. This will enable them to study different areas in business ethics. The module also provides instructions to help them conduct themselves in the debate in an ordered, civil fashion consistent with the module's learning objectives. This module is designed to offer a memorable educational experience for students.

II. Objetivos

- Ofrecer a los estudiantes la oportunidad de practicar la integración de las consideraciones éticas aprendidas en otro módulo previamente estudiado: “Three Frameworks for Ethical Decision-Making and Good Computing Reports (m13757)”.
- Lograr que los estudiantes desarrollen destrezas en resolución de problemas éticos, comunicación y trabajo en equipo.
- Exponer a los estudiantes en un ambiente público (debates, presentación oral) donde desarrollen sensibilidad moral ante los distintos ambientes de negocios organizacionales.
- Provocar la creatividad de los estudiantes por medio del análisis y las presentaciones orales.
- Lograr que los estudiantes vean cuan trabajoso es defender posiciones éticas.
- Lograr que los estudiantes obtengan conocimientos por medio del aprendizaje colaborativo.

II. Objectives

- To offer students the opportunity to practice the integration of ethical considerations learned in a previously studied module, Three Frameworks for Ethical Decision-Making and Good Computing Reports (m13757).
- To bring it about that students develop skills in resolving ethical problems, communication skills, and skills pertinent to working in teams.
- To expose students to a public environment (debates, oral presentations) where they can develop moral sensitivity before distinct (business) organizational environments.
- To stimulate students' creativity by means of analysis and oral presentation.
- To bring it about that students can see how difficult it is to defend ethical positions.
- To bring it about that students can obtain knowledge by means of collaborative learning.

III. Estrategias Sugeridas para Cumplir con los Objetivos (Se espera que estas estrategias de aprendizaje aporten al desarrollo global del estudiante.)

- Se le asigna el módulo a los estudiantes al principio de semestre o trimestre escolar, de manera que, puedan desarrollar los preparativos correspondientes en el transcurso. Los estudiantes necesitan tiempo para desarrollar las destrezas necesarias para realizar las actividades, estudiar los casos, aprender a analizar los casos de una forma ética, organizarse como grupo y familiarizarse con las instrucciones que se ofrecen en el módulo correspondiente.
- Los estudiantes se dividen en dos grupos: A y B. Cada grupo se divide en dos equipos: (A) 1 y 2, (B) 1 y 2.
- Un equipo realizará su presentación y defenderá su posición ante preguntas y cuestionamientos de parte del otro equipo, del instructor y de los demás estudiantes. (a) Un equipo presenta su análisis del caso en un espacio de siete minutos; (b) el otro equipo comenta acerca de esa presentación (se requiere más destrezas de escuchar activamente que destrezas de refutación); (c) el equipo que presenta, concluye, respondiendo al comentario (requiere clarificaciones adicionales de su

posición); (d) finalmente, el equipo que presenta contesta preguntas que realizan el instructor y los demás estudiantes.

- Se debe prevenir que los estudiantes compitan sin una debida preparación.
- Se debe motivar a los estudiantes a que utilicen las herramientas de análisis para tomar decisiones éticas que tienen a su disposición.

III. Strategies Suggested in order to Achieve Learning Objectives (It is expected that these learning strategies will bring about the global development of the student)

- This module should be assigned to the students at the beginning of the quarter or semester in a way that allows them to prepare properly for the activity. Students need time to learn the skills necessary for realizing activities, studying cases and learning how ethically to analyze case studies. They also need time to organize themselves as a group and to familiarize themselves with the instructions offered in the corresponding student module(s).
- Students are divided into two groups: A and B. Each group is divided into two further groups (A) 1 and 2 and (B) 1 and 2.
- Each team gives a presentation and defends their positions in the face of questions and challenges on the part of another team, the instructor, and other students. (a) One team presents its case analysis in seven minutes; (b) the other team comments on this presentation (which requires active listening and argumentative skills); (c) the first team concludes by responding to the commentary of the other team (which requires additional clarification of their position); (d) finally, the first team answers questions put forth by the instructor and the other students.
- Students should not compete unless they have thoroughly prepared the pool of cases as well as the accompanying decision-making tests and frameworks.
- Students should be motivated to utilize the provided analytical tools for making ethical decisions.

IV. Roles del Instructor/a y del Estudiante en la actividad del Tazón de la Ética en Ambientes de la Organización

IV. Instructor and Student Roles for the Ethics Bowl for the Environments of the Organization

Instructor

- Establece las reglas de la competencia (Se incluyen en el módulo de estudiantes): Límites de tiempo en la presentación, orientación a los competidores, criterios de evaluación.
- El instructor es el anfitrión de la competencia; asume una posición seria y de liderazgo; es buena idea que su vestimenta para esta ocasión sea una formal, relacionada con su rol de anfitrión.
- Sigue al pie de la letra las reglas de la competencia.
- Administra el tiempo para cumplir con normas establecidas.
- Estructura un diálogo, de la forma preguntas/ respuestas, con los equipos que presentan y con los demás estudiantes.
- Ofrece retroalimentación al equipo que estuvo a cargo de la presentación al final de la clase.
- Ofrece comentarios y sugerencias a los equipos que así lo ameriten.

Instructor

- Set forth the competition's rules as given in the student module. Limit the time for each presentation, orient the competing teams, and establish evaluation criteria.
- The instructor hosts the competition and assumes a position of leadership. It is even a good idea to dress up for the occasion with formal wear.
- She or he is responsible for making sure that students follow the rules of the competition to the letter.
- She or he administers the time in order to comply with established norms.
- The instructor structures a dialogue through questions and short commentaries with the teams and with the audience.
- The instructor provides feedback to the presenting team after the competition.
- Finally, the instructor offers commentaries and suggestions to the teams as these are required.

Estudiantes (Recordemos que en esta dinámica el trabajo colaborativo entre los estudiantes es esencial para maximizar su propia enseñanza)

- Asumirán una participación activa en el proceso de los debates.
- Serán los jueces de las controversias donde se confronten los valores éticos.
- Ofrecerán estrategias que permitan remediar alguna situación ética.
- Escucharán con atención las ponencias y estarán preparados para argumentar utilizando sus conocimientos adquiridos.
- Evaluarán a sus pares por medio de unas formas que le administra su instructor/a y, además, podrán autoevaluarse. (Esto para que el instructor pueda llevar el progreso del estudiante de forma ágil y organizada)

Students

- Students will assume active participation in the debates.
- Students will be judges in controversies where ethical values conflict with one another.
- Students will offer strategies that permit the remediation of any ethical situation.
- Students will listen attentively to the commentaries of their peers and will be prepared to offer arguments that make use of their acquired knowledge.
- Students will evaluate their peers by means of forms provided by the instructor and, in addition, will carry out self-evaluations. (This last so that the instructor can bring about student progress in an agile and organized form.)

EAC Toolkit Project

This module is a WORK-IN-PROGRESS; the author(s) may update the content as needed. Others are welcome to use this module or create a new derived module. You can COLLABORATE to improve this module by providing suggestions and/or feedback on your experiences with this module.

Funded by the National Science Foundation: "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF-SES-0551779