

Instructor's Guide to *Ethics for the Information Age*
Seventh Edition

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Preface

This booklet has supplementary information for instructors using the seventh edition of *Ethics for the Information Age*. It gives practical suggestions for running a successful class, points out other resources available via the Web, and contains solutions to all of the book's review questions. If you identify any errors in this manual, or if you have any ideas for additional exercises, I would appreciate hearing from you.

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Teaching Computer Ethics

Introduction

Teaching a computers, ethics, and society course for the first time can be intimidating. Unlike the typical computer science class, which focuses on technical content, a computers and society class focuses on people and the decisions they make. Doing ethics is not like finding the maximum element on a list. The moral problems discussed in this book are complicated, and there are no algorithms that enable you to “solve” a moral problem as neatly as you can construct a binary search tree. If you have little or no formal training in ethics, you may feel uncomfortable teaching an ethics class.

Fortunately, your job is *not* to preach to the students or tell them how they ought to behave (outside of class, anyway!). Rather, your role as the teacher is to raise questions, give students the opportunity to formulate answers, and then gently, but firmly insist that the students justify their answers by explaining their reasoning. If you are successful, the students will complete the course with a greater understanding of the social and ethical implications of computer use and abuse, an improved ability to think critically and defend their decisions logically, and a greater appreciation for alternate points of view.

As C. Dianne Martin and Hilary J. Holz put it:

Our belief is that ethics cannot be taught; rather what can be taught is a framework for evaluating ethical dilemmas and making decisions. In accepting the premise that technology is value-laden, we stress the need to teach a methodology of explicit ethical analysis in all decision-making related to technology... The role of ethics education should be to provide students with at least a minimal theoretical background essential for their understanding of the role that values and ethics play in all decision-making, whether it be technical, economic, political, social, or personal.¹

¹“Non-Apologetic Computer Ethics Education: A Strategy for Integrating Social Impact and Ethics into the Computer Science Curriculum,” C. Dianne Martin and Hillary J. Holz, The Research Center on Computing & Society (web site), www.southernct.edu/organizations/rccs.

What is the best way to achieve this goal? The consensus among experienced instructors is that the best computer ethics classes are discussion-oriented. Students are more receptive to hearing ideas from peers than from you. They will come to realize that every complicated issue can be looked at from multiple points of view. They will also see that all opinions are not equally valid, and that the best arguments are those that use logic to reach conclusions from facts and commonly held values.

Discussions

Finding topics to discuss should not be a problem for you. The book raises far more issues than you will have time to discuss, and late-breaking news stories provide even more discussion material. You will have to pick and choose the topics you deem most important. Take advantage of the discussion questions and in-class exercises found at the end of each chapter. They can lead to interesting class debates and require no preparation beyond reading the chapter.

The end-of-chapter interviews provide another source of discussion topics. Your students may be highly critical of some of the opinions expressed by the interviewees—so much the better!

One of your important responsibilities as the teacher is to prevent a few extroverts from dominating the discussion. It is easier to keep the discussion moving from person to person if you can get a wide variety of people used to speaking up regularly. Ideally your class is small enough that you can learn the name of each student. If you know everyone by name, you can call on people even if they do not have their hands up. The first few meetings of your class are crucial in establishing a culture of engagement. Try to create an expectation among the students that nearly everyone will contribute something to every class session.

Another one of your responsibilities is to ensure that the students justify their point of view. If a student should say, “I think such-and-such is wrong” without further elaboration, you should ask the student to explain *why* the action is wrong. Sometimes you need to drill down several levels before you get to the moral value or principle upon which the conclusion rests. I encourage my students to couch their arguments in one or more of these words: benefit, harm, right, obligation, duty, or character. A utilitarian analysis relies upon an evaluation of benefits and harms. A social contract theory analysis focuses on rights. A Kantian analysis considers duties or obligations. An analysis from the perspective of virtue theory determines whether the action is consistent with someone having good moral character. Asking for these words can have two benefits. It makes the analysis more rigorous, and it helps the class understand the ethical theory being invoked.

Many of the issues discussed in this class are highly controversial. Students often have difficulty coming up with a logical argument defending a point of view to which they are

emotionally attached. One way to solve this problem is to poll the class and find out which students support an issue and which are opposed to it. If the class is reasonably well divided between the two points of view, ask the students to argue the point of view opposite to their own personal beliefs. Without an emotional attachment to a particular point of view, students can be more analytical.

You can add value to a discussion and keep it moving along through the use of meta-comments. For example: “Maria has just given a utilitarian argument why the proposed action is wrong. Can someone analyze this issue from a Kantian point of view?”

It is important that students understand there are multiple ways to look at nearly every issue. Through the use of leading questions, you can help ensure that both sides of an issue are expressed. If you cannot find anyone to express a contrarian view, you may need to bring that view out yourself. Be prepared to promote either side of every issue!

Role-Playing Exercises

You should occasionally set aside time for role-playing exercises. Role-playing activities guarantee that many students will participate, and students particularly enjoy them. The textbook contains many of these exercises.

For a typical activity, the class is divided into small groups that give presentations representing a particular point of view. You will need to give the groups time to discuss the issue and devise the arguments they will make to the rest of the class. The amount of time depends on the exercise, but it is often 10–20 minutes. Next, each group makes its case. Again, the amount of time depends on the exercise, but it is often 20–30 minutes. Finally, it is good to have a concluding discussion in which the students have the opportunity to discuss the relative strengths of each group’s case.

Writing Assignments

I believe in the adage that “You don’t know what you know until you write it down.” To that end, writing assignments provide an important opportunity for students to practice constructing ethical evaluations. The media are filled with stories raising moral problems related to information technology. It is easy for students to find a current news story related to the topic of a chapter. In a typical 600-word essay I ask students to describe a moral problem, take a clear stand on whether a particular action or decision is right or wrong, and then defend their position through the use of one or more of the practical ethical theories described in the book (Kantianism, act utilitarianism, rule utilitarianism, social contract theory, or virtue ethics). You can find rubrics for grading written essays on the Web (see the next section).

Web Resources

A variety of Web sites contain information valuable to instructors of computer ethics courses. This section describes a few good sites.

Robert Greene, a faculty member at the University of Wisconsin-Eu Claire, has created a Web site organized according to the chapters of *Ethics for the Information Age*. The site has links to hundreds of articles from Wikipedia, *The New York Times*, and other news sources. The home page for his site is people.uwec.edu/GREENER/phil308/index.htm.

The **ComputingCases.org** Web site provides detailed case studies that you can use in class. Some of them overlap with cases described in *Ethics for the Information Age*, while others are different. The site introduces a methodology called “Social Impact Analysis” for exploring the social and ethical issues related to a computing system. It gives practical advice on how to lead an ethics case discussion, and it provides a worksheet that students can use when weighing the pros and cons of alternative actions. The home page for the site is ComputingCases.org.

DOLCE is an acronym for Developing On/Off-Line Computer Ethics. The DOLCE Web site contains several classroom activities, including quizzes and role-playing exercises, that you can use early in the term to help motivate the study of ethics. The site also contains several rubrics (evaluation sheets) that can help you grade written essays. The URL of the DOLCE home page is edocs.uis.edu/kmil12/www/dolce.

Edward F. Gehringer at North Carolina State University has created an attractive visual map that provides links to Web sites, news articles, and case studies related to computer ethics. The URL for the **Ethics in Computing** site map is ethics.csc.ncsu.edu.

RCCS (Research Center on Computing & Society) is a particularly valuable site if you are integrating computer ethics in an existing computer science course. It provides case studies relevant to a wide variety of courses in the typical undergraduate computer science curriculum. You could also take advantage of these case studies if you are teaching a stand-alone computer ethics course. The home page for this site is rccs.southernct.edu.

CERIAS is an acronym for the Center for Education and Research in Information Assurance and Security. The CERIAS Web site is a good place to check if you are integrating computer ethics into another computer science course. Its materials suggest how discussions of ethical issues can be introduced into various undergraduate courses in computer science. The URL for this site is www.cerias.purdue.edu.

Summary

One of your roles as a teacher of computer ethics is to raise questions and ensure that a wide variety of points of view are expressed. You are also serving as a role model, demonstrating