Stony Brook University
Computer Science

Professional Ethics

CS Department Professional Ethics

If you are looking at this page, you probably have an interest in (or have been told by a professor to have an interest in) computers and ethics. Ethics One definition of ethics, according to Merriam-Webster, is "a set of moral principles or values". You may derive your own personal ethics from many sources: your family and culture, your religion or faith, the legal system where you live, etc. However, ethics in general is not the topic of this web page.

Computing Ethics Sometimes you will hear someone refer to "computing ethics", which is a whole range of ethical questions surrounding computer science and the use of computers. This is also not the primary topic of this web page, although it is addressed. If this is your primary interest, you might also want to take a look at Social Responsibility and the CS Student, which appeared in the ACM Crossroads Student Magazine in May 1995.

Professional Ethics This web page discusses professional ethics (or professional practice): the "principles of conduct" that we agree to be governed by as computer scientists and engineers.

As a student at Stony Brook, you have agreed to follow the university's rules regarding academic honesty and appropriate conduct. These are a statement of professional conduct for students. Faculty has their own rules regarding professional conduct (the Computer Science faculty has adopted a statement which will soon be on the department's web site). Depending on where you are in life, you may have several different sets of professional ethics to adhere to. It is important to think about who you are, what roles you play, and how you can act professionally in those different roles.

This web page is one place for you to start thinking about professional ethics. Professional ethics is also a topic in the syllabus in the following courses:

CSE110
CSE114
CSE219
CSE301
CSE302
CSE308

CSE114, CSE219 and CSE308 are required for all CSE/ISE majors. For CSE308 students must write an essay on a topic related to software engineering ethics. Students may also write an essay on software engineering ethics to satisfy the requirements for CSE300.

Codes of Ethics

There are many computer science-related organizations that have codes of ethics (Berleur and Brunnstein 1996). However, most computer scientists are members of the ACM or the IEEE, and so have agreed to be bound by one of the following:

The ACM Code of Ethics
The ACM/IEEE Software Engineering Code of Ethics and Professional Practice
The IEEE Code of Ethics

Printouts of the ACM/IEEE code of ethics are available in the Computer Science Building outside the office of the undergraduate secretary. What you can do: Look up one of the above codes of ethics. Read it. Print it out and save it for reference. It is there to protect and guide you, as well as to protect those you work with and for.

Organizations

Most large companies have an ethics officer, who is there to educate and advise employees about issues relating to professional practice. You may meet one or more of the ethics officers from local companies, such as CA, Symbol and Reuters, during your time at Stony Brook.

Organizations that are broadly considered to "be about" ethics of computing, or professional practice in computer science, include:

- Computer Professionals for Social Responsibility
- The Centre for Computing and Social Responsibility
- The Center for Applied Ethics, page on Computer and Information Ethics
- The Web Clearinghouse for Engineering and Computing Ethics
- ACM SIG on Computers and Society
- Western University
- Connecticut State University

What you can do: Look up one or more of the organizations above. Become aware of the ethical issues computer scientists and engineers face. Know that these organizations may be resources for you to use in case of an ethical conflict. Think about becoming involved.

Teaching Professional Ethics in Computer Science and Information Systems

The following is a list of listings of case studies relating to professional ethics and computer science or information systems:

- Online Ethics Center: Cases about Computers and Software
- ComputingCases.org

Here are some newspaper articles and websites on topical issues:

- CNN, August 23, 2000: White House e-mail administrator says he never told Clinton about missing messages.
- Information Week, May 14, 2001: The Ethics of Data.
- New York Times, January 23, 2002: Master Key Copying Revealed. A computer security researcher applies his research techniques to a brick-and-mortar task: master key copying. He and his company then face the ethical question of whether, and how, to release this information.
- New York Times, August 22, 2002: For the Doctor's Touch, Help in the Hand. An article about the use of PDAs in medicine. Discussion of technology and patient privacy.
- Website on Carnivore. Includes a discussion of the responsibilities of computer scientists in the area of individual privacy.
- Wired, April 02, 2002: Yahoo's 'Opt-Out' Angers Users. An article about privacy policies online.
- Voting software. A page about security of voting software. An article about this same topic, published 9/23/2003, can be found here.
- There are many articles about security holes in commonly-used software. For example, the NYTimes reported on Dec. 1 2003 that a computer scientist had found holes in Internet Explorer. Instead of informing Microsoft first, the computer scientist publicized his findings on public mailing lists.
- Information Week runs a series on technology and ethics. Articles are archived online.

In the future, links to more computing ethics topics that come up in the news will be posted here.

There have also been discussions about how to incorporate professional ethics in to the computer science curriculum:

- The Third Impact CS Report

What you can do: Take a course in professional ethics, or issues relating to technology and society (related courses you can take at Stony Brook, some of which count for a DEC H, include: BUS347, SOC315, EST201, EST302, EST391, PHI104, PHI230, PHI364, PHI372, WISE242, BME201, various ITS courses). Look at some of the case studies on the websites above. Think about them. What would you do? Other examples (bad and good) of professional practice in computer science are frequently to be found on the front pages of such newspapers as the New York Times. Become aware. Become educated.

Books and Journals

The following is a list of books about computing ethics that we have in our local university libraries (possibly in an earlier edition). For each book, a brief summary and comments are given. Books I recommend have a + next to them.

- *Sara Baase, A Gift of Fire: Social, Legal and Ethical Issues for Computers and the Internet (2nd ed.), 2003.*

Sections cover: Unwrapping the Gift; Privacy and Personal Information; Encryption and the Interception of Communications; Can We Trust the Computer?; Freedom of Speech in Cyberspace; Intellectual Property; Computer Crime; Computers and Work; Broader Issues on the Impact and Control of Computers; Professional Ethics and Responsibilities.
My comments: Standard computing ethics textbook. Chapter 10 includes a set of test cases which may be helpful. Has a website with teaching resources, the website includes sample assignments and quizzes, and an extensive collection of links.

- *Jacques Berleur and Klaus Brunnstein, Ethics of Computing: Codes, spaces for discussion and law, Chapman & Hall, 1996.*

My comments: A collection from the IFIP Ethics Task Group. Interesting for faculty, much less so as an undergraduate text book. Includes a collection of codes of ethics from different professional societies (related to CS) in different countries.

- *Stacey Edgar, Morality and Machines (2nd ed), Jones andBartlett Publishers, 2002.*

Sections cover: Ethical Decision Making; Is Ethics Possible; The Search for a Basis for Ethics; Software Piracy, Property, and Protection; Computer Crime; Computer Intruders, Viruses, and All That; Privacy; Errors and Reliability; The Computer World of Work; Responsibility, Liability, and Professional Ethics; Computers, the Government, and the Military; The Artificial Intelligentsia and Virtual Worlds.
My comments: More of a scare tactics book than an ethics book; doesn't distinguish between professional ethics (software engineering ethics) and computing ethics. Also in one of the appendices makes the startling claim that computer ethics are not far removed from computer aesthetics!

- *Tom Forester and Perry Morrison, Computer Ethics: CautionaryTales and Ethical Dilemmas in Computing (2nd ed), MIT Press,1993.*

Sections cover: Social, Ethical, and Professional Issues in Computing; Computer Crime; Software Theft; Hacking and Viruses; Unreliable Computers; The Invasion of Privacy; Artificial Intelligence and Expert Systems; Computerizing the Workplace.
My comments: Includes a section of "hypothetical scenarios for classroom discussion" (10 of these), with real scenarios scattered through the other chapters. Good source of case studies, if you are willing to do some gleaning.

- *Kenneth Goodman (ed.), Ethics, Computing, and Medicine: Informatics and the Transformation of Health Care, Cambridge University Press, 1998.*

My comments: Interesting for faculty, not so much for undergraduates. Totally health-care related.

- *Deborah Johnson, Ethical Issues in the Use of Computers (3rd ed), Wadsworth Publishing Company,2000.*

Sections cover: Codes of Conduct for the Computer Professions; Issues of Responsibility; Privacy and Security; Computers and Power; Software as Property.

My comments: Heavy on the law; a little dense for undergraduates although good for an IS MS? Collection by various authors in various fields. (Previous editions featured John Snapper as co- author.)

- *Joseph Migga Kizza, Ethical and Social Issues in the Information Age, Springer-Verlag, 1997.*

Sections cover: Morality and the Law; Ethics, Technology and Values; Ethics and the Professions; Anonymity, Security, and Privacy; Intellectual Property Rights and Computer Technology; Computer-Augmented Environments: The Workplace; Software Issues; New Frontiers for Ethical Considerations: Artificial Intelligence, Cyberspace and Virtual Reality; Ethical and Social Issues in Cyberspace.
My comments: A sort of summary of the issues textbook, no case studies.

- *+George Reynolds, Ethics in Information Technology, Thomson,2003.*

Sections cover: Ethics for IT Professionals and IT Users; Computer and Internet Crime; Privacy; Freedom of Expression; Intellectual Property; Software Development; Employer/Employee Issues.
My comments: Each chapter ends with several 'pretend' case studies and two actual case studies, complete with links to newspaper articles and other sources. Excellent resource for instructors who want to spend a little time discussing one ethics topic in depth. Review copy in my office.

- *+Richard Spinello, Case Studies in Information and ComputerEthics, Prentice Hall, 1997.*

Sections cover: Ethics, Computers and Information; Frameworks for Ethical Analysis; The Acquisition of Information; Information Access; Information Stewardship; Software Ownership and Intellectual Property Issues; Computer Security and Computer Crimes; Liability, Safety, and Reliability; The Social Impact of Computer Technology.
My comments: The bulk of the book is roughly 38 case studies. Good for undergraduates, if used in conjunction with a statement of professional ethics and resources for identifying social, legal issues. (There may now be a new edition out.)

- *John Weckert and Douglas Adeney, Computer and InformationEthics, Greenwood Press, 1997.*

Sections cover: The Meaning of Ethics; Professional Ethics; Freedom, Information, and Images; Censorship of the Internet; Intellectual Property; Privacy; Responsibility; What Computers Should Not Do; Quality of Life and Work; Virtual Reality; Minds, Machines, and Morality.
My comments: A sort of summary of the issues textbook, no case studies.

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