CS 3111: Computer Ethics (4)

Catalog Description:
Ethical issues faced by computing professionals, including those related to computers in the workplace, intellectual property, privacy, crime, risk and liability, database security, and the Internet.

Textbook: M. Quinn, *Ethics in the Information Age*, 3rd Edition, Addison Wesley, 2008.
R. Spinello, Readings in Cyberethics, 2nd edition, Jones and Barlett, 2004.

Course Goals:
The objective of this course is understanding the impact of computers on society in general and how we as computing professionals can learn to recognize, evaluate and deal with ethical dilemmas which arise in the workplace. Special attention will be directed at the Internet, its impact on society as a whole and the profession in particular.

Prerequisites by Course & Topic
60 credits – junior standing ensures that students have seen a variety of courses already from which to draw their opinions.
Writ 31xx – students are expected to be able to compose basic written arguments.

Major Topics Covered in the Course
- Communication – oral
- Communication – written
- Privacy
- Security
- Risk
- Intellectual Property
- Constitutional Issues
- Crime
- Workplace Issues
- Societal Impact
- Professional Ethics

Class/Laboratory Schedule: Lecture: 4 hours per week, Laboratory: 0

Course Outcomes
1. Understand the historical context underlying developments in the information age.
   a. Recognize milestones in computing, networking, and information storage and retrieval.
2. Be familiar with the language and content of ethical discourse.
   a. Apply ethical theories such as Kantianism, utilitarianism, and social contract theory to contemporary situations.
   b. Recognize differences and similarities between computer ethics and regular ethics.
3. Recognize the moral issues that arise in a networked society.
   a. Understand the social and economic cost of problems such as spam, phishing, and identity theft.
   b. Balance the trade-offs involved in issues such as internet censorship vs. free speech, and centralized vs. decentralized internet policy making.
4. Understand the motivation behind modern debates surrounding intellectual property.
   a. Be familiar with the pros and cons involved with software patents, proprietary software, and the open source movement.
   b. Understand the significance of the Digital Millenium Copyright Act and digital rights management.
5. Appreciate the threats to privacy posed by modern information gathering techniques.
   a. Understand the technologies behind electronic surveillance, data mining, etc., and the legislation surrounding them.
6. Recognize the threats of unauthorized access to computer systems.

   a. Understand the social and economic cost of problems such as viruses, worms, hacking/cracking, and denial of service attacks.
7. Understand the ethical ramifications of computer reliability.
   a. Study cases of software/system error or failure and their social and economic cost.
8. Understand the effects of the information society on work and wealth.
   a. Know the effects of automation, globalization, and the digital divide on individuals and cultures.
9. Be familiar with ethical issues unique to computing professionals.
   a. Be familiar with the question of whether software engineering constitutes a profession.
   b. Be familiar with the Software Engineering Code of Ethics and Professional Practices.
10. Be able to express one's point of view concerning any of the above issues.
   a. Through oral communication.
   b. Through written communication.

Relationship to Program Outcomes

CS 3111 contributes to meeting the following program outcomes:

6. Students can communicate effectively both orally and in writing.
Students are expected to contribute to class discussion, engage in in-class writing exercises, write a term report, and present their report to the class. Course outcome 10 maps to this program outcome.

7. Students understand social, professional and ethical issues related to computing.
Students read contemporary ethical treatments from a textbook, a collection of essays, and online resources, and are tested on their content. Students also read and discuss daily news items in computer ethics and are graded on their participation. Course outcomes 1-9 map to this program outcome.

Assessment Plan for Course:

This course is assessed every third year by the instructor and a course assessment document covering all of the course outcomes and their effect on the program outcomes is prepared.

Estimate CSAB Category Content

	CORE	ADVANCED		CORE	ADVANCED
Data Structures			Computer Organization and Architecture		
Algorithms			Concept of Programming Languages		
Software Design	1				

Coordinator/Prepared by: H. Turner