

## CS485 – Computers and Society

Last Updated - 03/08/02

Course Manager - Charles Bauer, Professor Emeritus

3 credit hours; required for CS, not allowed for CPE; 150 min. lecture each week

**Current Catalog Description** - Discussion of the impact of computer technology on present and future society. Historical development of the computer. Social issues raised by cybernetics. Prerequisites: CS 105 and at least junior standing. (3-0-3) (C)

### Textbook

- Schellenberg, Kathryn, Annual Editions, *Computers in Society 02/03*: Dushkin/McGraw Hill

### References - other textbooks or materials

- WWW for research of topics

### Course Goals - Students should be able to:

- Demonstrate an understanding of the social and professional context in which computing is done.
- Demonstrate an understanding of the basic cultural, social, legal, and ethical issues inherent in the discipline of computing.
- Identify milestones in the development and application of information technology.
- Ask serious questions about the social impact of computing and to evaluate proposed answers to those questions.
- Demonstrate an awareness of the basic legal rights of software and hardware vendors and users, and the ethical values that are the basis for those rights.
- Research the social and ethical issues of a computer related topic from the list in the syllabus.
- Communicate, both orally and in written form, social and ethical issues of a computer related topic from the list in the syllabus.

### Prerequisites by Topic

- Broad understanding of information technology and applications.

### Major Topics Covered in Course

1. Topics in <i>Computers in Society</i>	11 hours
• Introduction to Computers in Society and Information Revolutions; The Economy; Work and the Workplace; Computers, People and Social Participation; Social Institutions (property) Law and Politics; Social Values and Risks: Ethics, and Privacy and Preserving the Past; International Perspective and Issues; Philosophical frontiers	
2. Social Issues on a broad set of Information Technology related topics such as:	18 hours
• Computers and Network Security; Computers and Privacy; Computers and Intellectual Property; Computers and Law; Computers and Distance Learning; Computers and Education; Computers and Women and Minorities; etc.	
3. History of Computers (by decades)	3 hours
4. Moral and Ethical Issues in Computers and Society and the ACM code of Ethics	9 hours
Orientation, Student Portfolio (for assessment purposes), Midterm	4 hours
Final Exam	-
	45 hours

### Laboratory projects (specify number of weeks on each)

- none

### Estimate CSAB Category Content in Credit Hours

CORE ADVANCED

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Data Structures	0	Computer Organization and Architecture	0
Algorithms	0	Concepts of Programming Languages	0
Software Design	3		

**Oral and Written Communications** - Every student is required to submit at least 4 written reports (not including exams, tests, quizzes, or commented programs) of typically 1000-3000 words and to make 2 oral TEAM presentations of typically 15-30 minutes duration. Include only material that is graded for grammar, spelling, style, and so forth, as well as for technical content, completeness, and accuracy.

- Team projects – Each project will be an interactive/multi-media web presentation that will address one topic from the unit assigned from the text. Each team will also make a 15-20 minute oral report on their topic. Peer review of content will also be done.
- Book reports – Science fiction book with computer as the key part of the story including how ACM code was/was not followed. 1100-2200 words.
- Short science fiction story – 1000-3000 words.
- History of Computers – 20-30 minute oral presentation (5 person team)
- Term paper – on student chosen topic and sent in for publication 1000-3000 words.
- Individual Projects – web page same topic as term paper.

**Social and Ethical Issues** - Please list the topics that address the social and ethical implications of computing covered in all course sections. Estimate the class time spent on each topic. In what ways are the students in this course graded on their understanding of these topics (e.g., test questions, essays, oral presentations, and so forth)?

- The entire course is comprised of reviewed and graded presentations, discussions and reports on social and ethical issues.

**Theoretical Foundations** - Please list the types of theoretical material covered, and estimate the time devoted to such coverage in contact (lecture and lab) hours.

- none

**Problem Analysis** - Please describe the problem analysis experiences common to all course sections.

- Social and ethical problems of computer science are analyzed on a variety of topics.

**Solution Design** - Please describe the design experiences common to all course sections.

- Solutions to social and ethical problems of computer science are presented on a variety of topics.

### Other Course Information

- Additional Suggested Course Assignments
  - none
- Planned Course Enhancements
  - Include topics on Professional Societies, Intellectual Property, Government Regulations, Industry Standards (Fall 2002)
  - Review and assess the social and ethical issues of projects assigned in other CS courses. (Fall 2003)
  - Replace “junior standing” pre-requisite with “COM421-Technical Writing (3 credit hours) or COM428-Verbal and Visual Communications” for students starting at IIT in Fall 2002 or later. COM421 or COM428 is replacing the non-technical elective in the BS in CS starting in Fall 2002.