

# CSCI 494 Social and Ethical Issues in Computing

## Spring 2010

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                  MWTh 2:00-3:00 p.m

I am typically in my office much more than the posted times, and you are welcome to stop by whenever my door is open. Check with me ahead of time if you want to be sure that I'll be there outside scheduled times.

### Class meetings

T 1:15–3:05 p.m.  
Room: Arm 123  
Final meeting 10:30 a.m. on Tuesday, May 4.

### On-line resources

Additional (and updated) course information will be available at the class page at

<http://cs.wheaton.edu/~cgray/csci494/>

I will e-mail you *at your college address* when there are major updates. Be sure that you frequently read mail sent there.

### Description

*CSCI 494. Social and Ethical Issues in Computing.*

Study of the ways in which the computer and communications revolution is changing society. Develop an awareness of and sensitivity to the ethical issues that arise in computer science and related professions.

Prerequisite: Senior standing in the major. (2 hours)

CSCI 494 is the capstone course for the computer science major; as such it is supposed to provide an opportunity to sum up your study of computing at Wheaton and how it relates to other disciplines you have studied and to your faith. Because this is a capstone course, you should be taking it near the end of your time at Wheaton: you should be close to completing both the computer science major and the general-education requirements. (If you have not taken one of the required courses in Philosophy or Christian Thought, in particular, you should take it this semester instead of this course.)

The way our capstone is defined by the catalog does not leave us much time for reviewing the discipline; we will instead focus on how computing and related technologies interact with humane concerns. In this class you will:

- develop a greater awareness of how computing (as well as technology more generally) interacts with non-technical concerns;
- identify the kinds of issues that are raised or shaped by information technologies;
- analyze specific issues at the intersection of computing and social concerns;
- articulate your own responsibilities from both a Christian and professional perspective.

This is not a typical computer science course: it will involve primarily reading, discussion, and writing. There will be no programming assignments. The level of your *prepared* participation in class will be the principal factor that determines how much you get out of this course.

## Grading and assignments

Your grade will be based on:

**Class participation** (20%) The quality of your participation is important. Your written responses to readings (see below) are included in this portion of your grade.

**Leading a class discussion** (10%) You will, with another student, be responsible for leading the discussion on one class day. Student-led discussion days are indicated by letters at the right in the schedule below; you will have an opportunity to sign up (or be assigned) at the second class meeting. Details will be provided separately.

**Short essays** (20%) A few short essays will be assigned during the term. Each should be 1–2 pages in length. These can be informal, but should be organized well and reflect careful thought about the assigned topic. (Initial due dates are on the syllabus; topics will be distributed separately.)

**Book review** (25%) You will write a review of and response to a book; more detailed information is provided separately.

**Final paper** (25%) Think of this as your take-home final: you are to write a 5–8 page paper on a topic related to the course. Details will be provided later.

All written work should be typed, neatly formatted, and double-spaced. Turn in hardcopy unless specifically instructed otherwise. For purposes of counting pages, use a 10–12 point font with 1-inch margins. Make citations in standard form (such as MLA or a common form supported by LaTeX/bibTeX), with the special case that you may reference all provided articles and textbook selections with the bracket form shown below and on the class readings page.

## Attendance

Because participation is such an important part of the course, there will also be a significant penalty for absences and late arrivals. Your late arrival would interfere with class for your fellow students; so attendance will be taken at the *beginning* of each class meeting, and you will not be counted present if you arrive late. (I suggest you plan to arrive a few minutes early.) You will be allowed up to two absences without penalty; for each subsequent absence your course grade will be penalized one-half letter per meeting. If you must miss, I can consider accommodating you only if you behave responsibly—including letting me know in a timely manner. If you have another obligation that interferes with your timely arrival, I expect you to keep me informed—just as you would an employer.

## Assigned and additional readings

The textbook for this class is:

Hester and Ford, eds., *Computers and Ethics in the Cyberage*, Prentice-Hall, 2001.

In the schedule below, there are readings from the textbook and other sources. Some of the additional readings are available online, in which case you will find a link in the online version of the readings list. I will also distribute a packet to cover the readings that are not readily available online.

The assigned readings should be considered a minimum. You will find links or references for additional readings in the online list, and I will continue to update the list during the semester. You should be looking for articles in regular news sources; feel free to point me (or the whole class) to anything interesting and relevant that you find. Look for sources of high quality; some blogs do qualify (I've included pointers to some), but most would not.

You are required to keep up with one additional online source, the RISKS Digest. RISKS publishes irregularly; it is most easily accessed via the online archive at

<http://catless.ncl.ac.uk/Risks/>

You are responsible for all issues from 25(90) (dated 8 January 2010) through Apr. 27. You should check and read RISKS at least once a week. I also strongly recommend reading the Freedom to Tinker weblog from Princeton's Center for Information Technology Policy, at

<http://www.freedom-to-tinker.com/>

**Responses to readings** In preparation for each class meeting that has assigned readings, you should write at least three questions, observations, or other responses to the readings (required or optional). Each item could be as brief as a single sentence. These should be emailed to me by noon the day before each class meeting, with the subject "CS 494 for *date*". I recommend that you include those thoughts as part of the notes you bring to class.

For some class meetings, you may be given specific questions or topics for which to prepare. When that is the case, you should turn in to me (either by email or hardcopy) a snapshot of your written preparatory notes before 7:00 a.m. the day class.

## Initial schedule and readings

The anticipated schedule appears below. Readings should be completed *before* the indicated dates. I'll let you know when there are changes, which will be reflected in the online schedule.

<i>Date</i>	<i>Reading</i>	
Jan 12		<b>Introductory matters</b>
19	[Lam88], ch 6, [AJGP93], app A	<b>Professions, Responsibilities</b> (Sign up for leading class discussion.)
26	ch 2, ch 1, [Pos90]	<b>Concepts</b> (Book selection by 4:00 p.m. on Feb 3.)
Feb 2		<i>Faculty Development Day</i>
Feb 9	ch 9*, ch 8	<b>Property</b> <i>(Essay 1)</i> Unauthorized use, abuse, and vicious programs
16	[Man98], [Bar93], [Sta97], [Tou01]	Intellectual property A:
23	ch 5, [And01], [Nis01], [Web02]	<b>Power and wealth</b> <i>(Essay 2)</i>
Mar 2	[Rac75], [Ber00], [Les01]	<b>Privacy</b> <i>(Essay 3)</i> B: Privacy and commercial interests.
<i>Spring break</i>		
Mar 16	<i>TBD</i>	Privacy and government. (Book reviews due 4:00 p.m. on Wed., Mar 17) C:
23	ch 3, ch 12*	<b>Community</b>
30		Discuss/present book reviews.
Apr 6	[Joy00],[Tal95], ch 4, [Tur50]	<b>Persons</b> D:
13	ch 10	(Revised book review due.)
20	[Hoa81], [Tho84], [Wei95]	<b>Responsibilities</b> , revisited
27		Presentation and discussion of your final papers.
May 4	[Bas98], [Buc99]	(Final paper and last essay due.) Final thoughts.

In all but two cases, you should read the entire chapter.

- Chapter 9: Omit the first and last articles (Forester and Morrison, Gozzi).
- Chapter 12: Only the article by Kellner and Groothius.

## Assigned readings

- [AJGP93] Ronald E. Anderson, Deborah G. Johnson, Donald Gotterbarn, and Judith Perrolle. Using the new ACM Code of Ethics in decision making. *Communications of the ACM*, 36(2):98–107, February 1993.
- [And01] Ross Anderson. Why information security is hard: An economic perspective. In *17th Annual Computer Security Applications Conference*. Applied Computer Security Associates, 2001. Available from the author’s page at <http://www.cl.cam.ac.uk/~rja14/>.
- [Bar93] John Perry Barlow. Selling wine without bottles: The economy of mind on the global net, 1993. [http://www.eff.org/Misc/Publications/John\\_Perry\\_Barlow/HTML/idea\\_economy\\_article.html](http://www.eff.org/Misc/Publications/John_Perry_Barlow/HTML/idea_economy_article.html).
- [Bas98] Lionel Basney. Questioning “progress”. *Books & Culture*, September/October 1998.
- [Ber00] Hal Berghel. Identity theft, social security numbers, and the web. *Communications of the ACM*, 43(2):17–21, February 2000.
- [Buc99] Mark Buchanan. Trapped in the cult of the next thing. *Christianity Today*, 43(10):62–72, September 6 1999.
- [Hoa81] C.A.R. Hoare. The emperor’s old clothes. *Communications of the ACM*, 24(2):75–83, February 1981.
- [Joy00] Bill Joy. Why the future doesn’t need us. *Wired*, April 2000. <http://www.wired.com/wired/archive/8.04/joy.html>.
- [Lam88] David Alex Lamb. Software engineering: An emerging profession? External Technical Report 88-233, Department of Computing and Information Science, Queen’s University, September 1988. Available at <http://www.cs.queensu.ca/TechReports/Reports/1988-233.pdf>.
- [Les01] Toby Lester. The reinvention of privacy. *Atlantic Monthly*, 287(3):27–39, March 2001. Library print holdings, or full-text via library database Academic Search Elite.
- [Man98] Charles C. Mann. Who will own your next good idea? *Atlantic Monthly*, 282(3):57–82, September 1998. Library print holdings, or full-text via library database Academic Search Elite.
- [Nis01] Helen Nissenbaum. How computer systems embody values. *IEEE Computer*, 34(3):120;118–119, March 2001. PDF available from the author, at <http://www.nyu.edu/projects/nissenbaum/papers/embodyvalues.pdf>.
- [Pos90] Neil Postman. Informing ourselves to death, 1990. [http://www.eff.org/Net\\_culture/Criticisms/informing\\_ourselves\\_to\\_death.paper](http://www.eff.org/Net_culture/Criticisms/informing_ourselves_to_death.paper).
- [Rac75] James Rachels. Why privacy is important. *Philosophy & Public Affairs*, 4(4):323–333, 1975. Accessible via the library (JSTOR) as <http://links.jstor.org/sici?sici=0048-3915%28197522%294%3A4%3C323%3AWPII%3E2.O.CO%3B2-G>.
- [Sta97] Richard Stallman. The right to read. *Communications of the ACM*, pages 85–87, February 1997. <http://www.gnu.org/philosophy/right-to-read.html>.
- [Tal95] Stephen L. Talbott. The machine in the ghost. In *The Future Does Not Compute: Transcending the Machines in Our Midst*, chapter 2. O’Reilly & Assoc., 1995. <http://www.ora.com/people/staff/stevet/fdnc/ch02.html>.
- [Tho84] Ken Thompson. Reflections on trusting trust. *Communications of the ACM*, 27(8):761–763, August 1984.
- [Tou01] David S. Touretzsky. Free speech rights for programmers. *Communications of the ACM*, 44(8):23–25, August 2001.

- [Tur50] Alan Turing. Computing machinery and intelligence. *Mind*, LIX(236):433–460, October 1950.
- [Web02] Arnd Weber. Enabling crypto: How radical innovations occur. *Communications of the ACM*, 45(4):103–107, April 2002.
- [Wei95] Mark Weiser. The technologist’s responsibilities and social change. *Computer-Mediated Communications Magazine*, 2(4):17, April 1 1995. <http://metalab.unc.edu/cmc/mag/1995/apr/last.html>.