Syllabus for
CSCI 494 Social and Ethical Issues in Computing
Spring 2016

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Office hours:	MF 1:30-2:30 p.m.
	WTh 1:30-3:30 p.m.
	and by appointment (esp. Thursday mornings)

Class meetings

T 8:30–10:20 a.m., Meyer 131
Final meeting: 10:30 a.m.–12:30 p.m on Wednesay, May 4 *(may be rescheduled later that day)*

On-line resources

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

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

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.

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 a partner, be responsible for leading the discussion for half of one class meeting, in an area in which you will also do additional reading. Details will be provided separately.

Short essays and reading responses (30%) 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. (Some initial due dates are on the syllabus; topics will be distributed separately.)

Final paper (40%) Think of this as your take-home final: you are to write a 8–12 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 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.

Your presence in class calls for your full attention. That implies no use of networked devices to be virtually somewhere else. *If* you need to use a computer of some sort for access to your textbook or to take notes, you should do so with the networking turned off, and you are implicitly promising that you will not use it for any other purpose during class.

Academic Integrity

In your writing for this course, you need to be sure that you clearly indicate when you quote (use someone else's language) and where you pick up ideas. Avoid autoplagiarism, too: don't recycle work from other classes without citing it as such.

Other policies

Special circumstances and needs Wheaton College is committed to providing reasonable accommodations for students with disabilities. Any student with a documented disability needing academic adjustments is requested to contact the Academic and Disability Services Office as early in the semester as possible. Call 630.752.5941 or email jennifer.nicodem@wheaton.edu for further information.

Gender-neutral language For academic discourse, spoken and written, the faculty expects students to use gender inclusive language for human beings.

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, the readings that start with an number (such as [1Mumford]) are from that chapter in the textbook. Links to the other readings will appear in the online version of the readings list. There will also be a shelf of books available in the CS lounge in which you can find additional readings.

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 29(19) (dated 28 Dec 2015) through 29 Apr. You should check and read RISKS at least once a week. I also strongly recommend checking the Freedom to Tinker weblog from Princeton's Center for Information Technology Policy, at

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

See the suggested readings page online for additional suggestions.

Responses to readings In preparation for each class meeting that has assigned readings, should write a short response that indicates what you have read as well as the key ideas and questions the readings raise. Sometimes you will be provided with some specific questions or guidance. You will need to turn in a copy of this response at the beginning of class; I suggest that you keep a copy as part of your notes for discussion.

Initial schedule and readings

As you look at the topics in the schedule below, you may notice that several of them have been major subjects in the news over the last several months. In light of that, there are a couple of days on the schedule for which specific readings will show up on the class web page. You should expect some changes to the lists of both required and suggested readings—and you should feel free to contribute your own suggestions.

Note that the required readings are a minimum. The on-line version of the schedule suggests additional sources, and you will need to go beyond the minimum to get more than a minimal passing grade.

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.

Jan 12 *Introduction; professions*
   read: profession

 19 *Nature of technology*
   read: intellectual property
   read: [1Mumford], [1Barbour], [Pos90], [Nis01]
   write: How has your experience in computing affected your faith?
   write: (a) What does it mean to be liberally educated? (b) What sources inform your understanding
     of liberal education or the liberal arts?

 26 *What changes?*
   read: [AJGP93]
   Technology and power
   read: [Mor11b], [Fal08], [Les06c]
   also: Select an area for further exploration

Feb *2 Faculty development workshop*

Feb 9 *Property*
read: [And01], [Bow10], [9Mentor], [9Spinello], [9Spafford]

16 read: [Bar93], [Tou01], [Sta97]
also: Final topic question

23 *Privacy*
read: [Rac75], [Zuc14], [Duh12], [Car10b], [Har10], [VDSV12]

Mar 1 *Privacy (and government)*
read: [DL08], [SC14], [Pur14], [Sol11], [GM13], [GP13]

8 *Spring break*

15 *Relationships*
read: [3Dorbolo], [4Vonnegut], [You11], [3Barlow]

22 *Understanding*
read: [Tal95b], [10Turkle], [Car08]

29 *Intelligence*
read: [Tur50]

Apr 5 *Where are we going?*
read: [Joy00], [10Vonnegut], [Hel01], either [For09] or [Eve00]
also: Draft of your final paper

12 *Responsibilities*
read: [Hoa81], [Tho84], [Wei86]

19 *Loose ends, thoughts from your final papers*
read: *TBD*

26 *TBD*
read: *TBD*

May 4 read: [Buc99]
write: Reflection on computing and learning
also: Hand in final paper

Required 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. Online.

[Bar93] John Perry Barlow. Selling wine without bottles: The economy of mind on the global net, 1993. Online.

[Bow10] Mark Bowden. The enemy within. *Atlantic Monthly*, 305(5):72–83, June 2010. Online.

[Buc99] Mark Buchanan. Trapped in the cult of the next thing. *Christianity Today*, 43(10):62–72, September 6 1999.

[Car08] Nicholas Carr. Is Google making us stupid? *Atlantic Monthly*, August 2008. Online.

[Car10b] Nicholas Carr. Tracking is an assault on liberty, with real dangers. *Wall Street Journal*, August 7 2010.

[DL08]   Whitfield Diffie and Susan Landau. Brave new world of wiretapping. *Scientific American*, 299(3):56–63, September 2008.

[Duh12]   Charles Duhigg. How companies learn your secrets. *New York Times Magazine*, page MM30, February 19 2012.

[Everett]   Percival Everett. The fix. In *Best American Short Stories 2000*.

[Fal08]   James Fallows. "The connection has been reset." *Atlantic Monthly*, March 2008. Online.

[For]   E.M. Forster. *The Machine Stops*. In the public domain. Available at `http://en.wikisource.org/wiki/The_Machine_Stops` and in *Fairy Tales for Computers*.

[GP13]   Barton Gellman and Laura Poitras. U.S., British intelligence mining data from nine U.S. Internet companies in broad secret program. *Washington Post*, June 7 2013.

[GM13]   Glenn Greenwald and Ewen MacAskill. Nsa prism program taps in to user data of apple, google and others. *The Guardian*, June 6 2013.

[Har10]   Jim Harper. It's modern trade: Web users get as much as they give. *Wall Street Journal*, August 7 2010.

[Hel01]   Mark Helprin. The acceleration of tranquility. In *Forbes ASAP Big Issues: The Examined Life in the Digital Age*.

[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. Online.

[Les06c]   Lawrence Lessig. What things regulate. In *Code and Other Laws of Cyberspace, version 2.0*, chapter 7, pages 120–137. Basic Books, 2006. Online.

[Mor11]   Evgeny Morozov. Why the internet is a great tool for totalitarians. *Wired*, 19(1), January 2011. Online.

[Nis01]   Helen Nissenbaum. How computer systems embody values. *IEEE Computer*, 34(3):120;118–119, March 2001. PDF available online, from the author.

[Pos90]   Neil Postman. Informing ourselves to death, 1990. Online.

[Pur14]   Newley Purnell. Smartphone spyware targets hong kong protesters. *WSJ.D*, October 3 2014.

[Rac75]   James Rachels. Why privacy is important. *Philosophy & Public Affairs*, 4(4):323–333, 1975. Accessible via the library (JSTOR).

[SC14]   David E. Sanger and Brian X. Chen. Signaling post-Snowden era, new iPhone locks out N.S.A. *New York Times*, September 26 2014.

[Sol11]   Daniel J. Solove. Why privacy matters even if you have 'nothing to hide'. *The Chronicle of Higher Education*, 57(37), May 15 2011.

[Sta97]   Richard Stallman. The right to read. *Communications of the ACM*, pages 85–87, February 1997. Online.

[Tal95b]   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. Online.

[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. Available via library resources.

[VDSV12] Jennifer Valentino-Devries and Jeremy Singer-Vine. They know what you're shopping for. *Wall Street Journal*, December 7 2012.

[You11]   Jeffrey R. Young. Programmed for love: The unsettling future of robotics. *The Chronicle of Higher Education*, 57(20), January 21, 2011. Online.

[Wei86]   Joseph Weizenbaum. Not without us. *ACM SIGCAS Computers and Society*, 16(2–3):2–7, Summer/Fall 1986.

[Zuc14]   Ethan Zuckerman. The Internet's original sin. *Atlantic Monthly*, August 2014. Online.