

Course Information

Professor: Eric Roberts

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Drop-in hours: Tuesdays, 9:30–11:30 A.M.

TAs:

The TAs currently assigned to the course (we are looking for additional TAs to handle the unexpectedly large enrollment) are:

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Office hours and locations will be listed later this week on the CourseWork site, which is shared by the two courses on **Sp11-CS-181-01**.

Course descriptions

Here are the course descriptions as they appear on explorecourses.stanford.edu:

CS 181: Computers, Ethics, and Public Policy

(Formerly 201.) Primarily for majors entering computer-related fields. Ethical and social issues related to the development and use of computer technology. Ethical theory, and social, political, and legal considerations. Scenarios in problem areas: privacy, reliability and risks of complex systems, and responsibility of professionals for applications and consequences of their work. Prerequisite: 106B or X.

Terms: Spr | **Units:** 4 | **UG Reqs:** GER:ECEthicReas | **Grading:** Letter or Credit/No Credit
Instructors: Roberts, E. (PI)

CS 181W: Computers, Ethics, and Public Policy (WIM)

Writing-intensive version of CS 181. Satisfies the WIM requirement for Computer Science and Computer Systems Engineering undergraduates.

Terms: Spr | **Units:** 4 | **UG Reqs:** GER:ECEthicReas | **Grading:** Letter (ABCD/NP)
Instructors: Roberts, E. (PI)

As these descriptions indicate, the difference between CS 181 and CS 181W is that the latter meets the WIM requirement for CS and CSE (which is in the process of being integrated into the CS major in any event) and must therefore be taken for a letter grade. As noted later in the section on course requirements, the paper assignments for CS 181W include writing tutorials and require that you rewrite the papers based on the comments on the initial draft. You should, however, keep in mind that both CS 181 and CS 181W are in some sense writing-intensive and require more writing than the average CS course.

If you take the course for a letter grade, both CS 181 and CS 181W satisfy the Technology in Society (TIS) requirement for the School of Engineering and the General Education Requirement in Ethical Reasoning (GER:DB-EthicReas).

Goals

CS 181 has four main goals:

1. To encourage you to take ethics and social responsibility seriously—to regard these issues as integral aspects of your technical work and not as irrelevant concerns better relegated to those in the “fuzzy” disciplines.
2. To provide you with analytical tools from classical and applied ethics that will help you understand ethical questions that arise in the discipline of computer science.
3. To introduce various social policy questions raised by modern computing and give you a chance to hear—through a series of guest speakers—from the people who are most active in those policy debates.
4. To offer (assuming that you take the CS 181W version) an opportunity to improve your writing skills by working with tutors in the Technical Writing Program.

Lectures

Lectures are scheduled for Monday and Wednesday from 4:15–5:30 P.M. in Hewlett 201. To accommodate students who are participating in Stanford’s section-leading program (and anyone else who has a conflict with the Monday lecture time), I am also offering the option of taking Monday’s class in a seminar format from 7:00–8:30 P.M. on Monday evening. That option—in which I will expect more active participation because of the smaller size of the class—is open only to students who can’t make the regular Monday class. If you are in that position, please indicate the nature of your conflict on the course registration form (Handout #2).

In order to maintain flexibility to accommodate guest speakers during the quarter, I will not circulate a day-by-day syllabus at the beginning of the quarter. On a week-to-week basis, however, the syllabus for the course looks like this:

- Week 1 Course overview; scientific ethics and the military
- Week 2 Software reliability and risks of computing; introduction to ethical philosophy
- Week 3 Applying ethical philosophy; hacking and security
- Week 4 Computing and economics; intellectual property
- Week 5 Antitrust in the computing industry; specific issues from Microsoft and Google
- Week 6 The culture of cyberspace; work in the computing industry
- Week 7 Influencing policymakers; securing more democratic access to computing
- Week 8 The nature of online communities; networking and global politics
- Week 9 Unintended consequences of the Digital Age

A more detailed calendar handout, including reading assignments and descriptions of individual lectures, will be distributed each Wednesday for the following week. The calendars will also include occasional special events, most of which are optional. There are, however, two films—*The Day after Trinity* on March 29 and *Code Rush* on May 3—which are required for the course. We will set up showings for these films, but you are also allowed to watch them on library reserve in the Green Media Center.

Discussion sections

The material in CS 181 does not fit well into a purely lecture format. When we designed this course a little more than two decades ago, enrollments were typically around 20, which made discussions work very well. This year, with an enrollment nearly ten times that, it will be impossible for more than a small fraction of the class to say anything in lecture. To ensure that all of you have the opportunity to participate actively in discussion—which, in my experience, is the only way to have meaningful engagement in this topic—you **must** sign up for a weekly 50-minute section, which will meet on Thursday or Friday at the times indicated on Handout #2. Please fill out this handout in class today and turn it in before you leave. We will make the initial section assignments based on your preference forms; anyone seeking to add the class late or who does not turn in a form will be assigned to whatever spaces remain.

Prerequisites

The prerequisite for CS 181 is familiarity with programming at the level of CS 106B or CS 106X. Even though no programming is required for this course, understanding the ethical issues raised by computer science presupposes an appreciation of how complex programming can be. In addition, you will be expected to use a computer for various types of online interaction during the course. In particular, you must have an electronic mail account, be able to work with CourseWork web resources, and—working together with the other members of your project group—to develop a web page.

Texts

The required text for this course is the CS 181 course reader, which is available from the Stanford Bookstore. The course reader consists of a collection of background papers, mostly historical material that is less likely to be freely available online, on the topics we will cover in CS 181. Particularly in the later parts of the course, we will supplement that reading with more modern sources, all of which will be available electronically.

Course requirements

The required work for CS 181 consists of the following:

Reaction papers To make sure that everyone has thought about the reading before going to section, you will be responsible for a short (one to two pages) reaction paper every week before section. These papers will not be graded as formal writing assignments, but your section leader will note whether you have made a reasonable effort on each paper and use that determination as a major component of the section-participation grade.

Paper #1 The first major paper focuses on the risk of computer failures in critical systems. The details of the paper assignment will be handed out on Monday, April 4, and the first draft of the paper will be due on Wednesday, April 13. You will receive comments—both on the technical content and the writing—by Wednesday, April 27 and must submit a revised version of the paper on Wednesday, May 4.

Online forum During the week of April 25, we will conduct an “online forum” in which the class will act as a policy advisory committee convened to advise Congress on how to provide incentives to writers and artists in

the age of digital media. The online forum itself will not be graded or evaluated as a writing exercise, but each of you must follow the discussion and post at least one article to complete the associated paper, as noted in the following paragraph.

Paper #2

At the conclusion of the online forum, each of you must write a paper that defends a specific policy position growing out of the online debate. In your paper, you must cite at least one of your own postings, as well as those of other participants in the discussion. The initial draft of this paper is due on Wednesday, May 4. Comments will be returned by Wednesday, May 18, with rewrites due on Wednesday, May 25.

Final project

The most important part of your work for the course is a group project in which you research and develop materials on some aspect of computer science that raises significant ethical or public policy issues. The final projects will be presented at a miniconference held on Wednesday and Thursday, June 1 and 2. All topics must be approved by the course staff and will usually be chosen from a list circulated at the beginning of the fourth week. The deliverables are as follows:

1. An abstract for the project, which is due on Wednesday, May 18.
2. An annotated bibliography due on Wednesday, May 25.
3. A 15-minute oral presentation at the miniconference.
4. A web site that offers additional background material on the topic beyond what you have presented in the talk, which must be completed by Thursday, June 2.

Late policy

Each of the papers is due in class on the day specified in the syllabus. In special circumstances (primarily extended medical problems or other emergencies), we will consider requests for extensions. All extension requests must be approved at least 24 hours before the due date by TA Shrey Gupta, who has been assigned the role of extensions czar.

Because each of the papers must be read twice—once by the writing tutors and once by the CS 181 staff—we cannot let these deadlines slip. Thus, there are no “late days” in CS 181. Any papers that come in late will be assessed a penalty of one full letter grade for each class day that it is late. (An A– paper becomes a B– paper, and so forth.) All material for the final project must be submitted by Thursday, June 2.

Grading

Final grades for the course will be determined using the following weights:

- 20% Paper #1
- 20% Paper #2
- 20% Section participation and reaction papers
- 40% Final project

In addition to these points that total 100%, there will be opportunities to earn extra-credit points as the course proceeds. These opportunities will be detailed in the weekly calendar handouts.

The Stanford Honor Code

Particularly because this is a course on ethics, it seems appropriate to note that all students at Stanford are expected under the Honor Code to give proper credit for all work and to maintain traditional standards of academic integrity. The course staff will pursue aggressively all suspected cases of Honor Code violations.