

## Course Information

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### 1 Prerequisites

There are no prerequisites for this class, other than a willingness to engage in both the engineering and social science material and topics covered in the syllabus.

### 2 Units

6.S897/17.S952 is a 12-unit (3-0-9) graduate subject intended primarily for seniors and graduate students.

### 3 Lectures

Lectures will be held from 2:30 to 4:00 PM in Room 34-301 on Tuesdays and Thursdays. A schedule of topics will be posted on the class Stellar site.

### 4 The class online

The course Stellar site is at

<http://stellar.mit.edu/S/course/6/fa14/6.S897/index.html>

(Note that there is also a Stellar site for the Course 17 number, but it only redirects you to the Course 6 Stellar site.)

Handouts, assignments, and announcements will be available online only (except for this first handout, which is also available in dead-tree format).

If you have registered for 6.S897 or 17.S952, you will be automatically subscribed to the course mailing list on Stellar. If you have not registered for the class and wish to be added to the Stellar site, please email the staff list immediately. We will use this list to make important class announcements. In addition, you will be able to access some of the class material on the Stellar site only if you are added.

### 5 Textbook

There is no required textbook for this course. A list of recommended books is available on the *References* page on the Stellar site.

## 6 Groups

Two of the assignments will involve group projects.

The instructors will assign you to a group for the first project. Please notify us if you haven't registered for the class, otherwise you will not be put in a group.

For the final project, you may work in groups of your own choosing.

The final project team should be determined by the date given below. Students who need help finding a project group should contact the instructors. To keep groups running smoothly, students should ensure that their fellow members are actively participating and should communicate regularly. Students who cannot resolve group problems should contact the the instructors. If necessary, groups can be dissolved and reformed, with permission of the instructors and mutual consent or sufficient reason.

## 7 Policy project

The first project will focus on a policy issue identified in the charge of the Presidential Commission on Election Reform. Assignment details will be handed out on September 9. The general idea of the first project is to describe the issue or problem you are assigned, report on ideas that have been suggested to address this issue, discuss ways in which technology might be applied to deal with the assigned issue, and to report on possible barriers to reaching a satisfactory solution to the problem. Your group will make a brief presentation about what you've found on September 30, with an *individually* written 5–8 page memo on the topic due October 10.

## 8 Election observation

All participants in this course are expected to spend at least two hours engaged in systematic observation of voting in Boston on November 4. Details about this assignment will be given out toward the end of September. Two-person teams will be assigned to precincts in Boston, where they will observe voting for at least two hours, recording information about the voting process on a coding sheet you will be provided. Because doing research in a polling place requires special considerations, we will conduct special training sessions, on a couple of evenings in mid-October, about how the observations will be conducted.

You will be required to write-up a 3–5 page summary memo of what you observed, in addition to turning in the coding sheet you will use to make notes during the day. This memo will be due November 14.

This observation process is related to a larger research project under way at MIT, called the Polling Process of the Future (PPotF). PPotF is recruiting student researchers who are willing to commit to a full day of observation on November, in return for a payment of \$500. If you are interested in this paid opportunity, see Professor Stewart early in the semester.

## 9 Final project

Students will be responsible for a final project. You must work in a group of three or four people. The nature and the topic of the project is your choice, although it needs the approval of the instructors. We will provide a list of topics we believe would be interesting to pursue, but you are free to explore other topics, too. We will generally approve interesting topics about voting machine interfaces, system security and auditing, applications to aid in addressing capacity issues at the polls, and methods of voter identification.

It is advisable to get started early; we will gladly accept proposals before the deadline. Early submission gives us a chance to review and approve your project proposal, and to suggest references that you may have overlooked.

Important dates for the project:

- By Monday, October 3 - Every student must individually post one (or more) project ideas on the *Stellar Forum*. Each post should have a subject heading of the following form: TOPIC - *TopicName*. This is a way for students to learn about what other students are interested in and find teammates. If you have more than one idea or interest, feel free to post all of your ideas, but please use different posts with different headers. Submit a one-page project idea via e-mail to [6s897-17s952-staff@csail.mit.edu](mailto:6s897-17s952-staff@csail.mit.edu). Your ideas can be from the project ideas we post or they can be new ideas. Feel free to choose your teammates as you wish. We expect groups to be three or four students.
- By Friday, October 17 - Turn in team composition and a multi-page project draft and bibliography.
- October 29–31 - During this week, each project group will check in with the instructors to review their progress.
- November 17–21 - During this week, each project group will again check in with the instructors to review their progress.
- December 2 and December 4 - Groups will present short talks on their projects in class.
- Tuesday, December 9 (last class)- Written projects are due. We expect that a typical write-up will be 20–25 pages or so; some will be longer, some less. The length is less important than the content, of course.

We plan to post all submitted project write-ups on the class web site, so that they are world-readable. So, put your best foot forward for yourself, for the class, and for MIT!

## 10 Grading

Grades are:

20% for participation  
20% for the policy project  
20% for Election Day observation  
40% for the final project

## 11 Collaboration and plagiarism

All of the written assignments will involve some degree of collaboration. For the policy project and Election Day observation, we of course expect that teams will work together to gather the required information and discuss how to make sense of what they have discovered. However, we expect the individual memos to be written solely by the author. (An exception will be made for tables of data and other display materials, such as sketches of polling places, which can be shared among teammates.) Acknowledge anyone in an opening footnote with whom you discussed the ideas in your memo, whether that be a classmate or someone in the MIT Writing Center.

Finally, we cannot acknowledge enough that you must cite all your sources properly. You must remove any possibility of someone else's work from being misconstrued as yours. Plagiarism and other anti-intellectual behavior will be dealt with severely. (When we have found instances of plagiarism and/or unauthorized collaboration in the past, we have given reduced or failing grades for the class (not just for the particular assignment), reported the incident to the Dean for Student Affairs, and/or filed a complaint with the Committee on Discipline.)

## 12 Ethics

This is a course about the intersection of elections and technology. You will be doing projects that will either require, or encourage, direct engagement with that process. Here are some guidelines.

First, remember that there are laws governing the presence of people in polling places during the conduct of elections. Massachusetts bars “electioneering” within 150 feet of a polling place. Massachusetts also has among the most liberal laws about observing the conduct of elections. However, the Warden (i.e., the election official in charge of a polling place) may exclude anyone who is “disorderly or who obstructs the access of voters.” There are other requirements, as well, that we will go over before Election Day.

Second, leaving the law aside, failure to comport oneself in anything less than exemplary fashion will reflect poorly on you and MIT, and may make it hard for MIT students and faculty to do research in polling places in the future.

Third, there will be some interesting final projects that may interact with election-related Web sites, whether it be from private organizations that have been set up to encourage this sort of thing, or from official Web sites that communicate information to voters. Because elections occur on a single day, and there are no “do-overs,” it is unethical, and perhaps illegal, to interact with election-based Web sites in such a way that hinders access by the general public. If you have any questions about what constitutes hindering access, please discuss the matter with your instructors. (We’ll also note that election officials generally feel differently about things after an election is over than before Election Day.)

Fourth, we strongly recommend that you consult the *Athena Rules of Use* at

<http://ist.mit.edu/services/athena/olh/rules>

and Section 13.2 of the MIT Policies and Procedures “Policy on the Use of Information Technology” at

<http://web.mit.edu/policies/13.2.html>.

Finally, we recommend that you read and review the *ACM Code of Ethics and Professional Conduct* which can be found online at

<http://www.acm.org/constitution/code.html>.

(Or Google for “acm ethics”.)

We expect all students in this class to follow the guidelines presented in this document, and in the documents just cited. If you are in doubt about the legality or ethics of any activity related to this course, please consult the staff before undertaking any such activity.

## 13 Closing

We hope you enjoy this class. As it is a first offering, it will have some “rough edges”, for which we apologize in advance.

We look forward to working with you. Perhaps together we can figure out some new ways that technology can make voting and elections work even better!