Throughout the social sciences, there has been an explosion of new research methods and statistics, with the result that standard graduate course sequences often cover a declining proportion of the methods and statistics that actually appear in leading journals. Because of this development, many graduate students are not as well prepared as they once were to read the journals, to serve as research assistants, and to develop methodologically sophisticated research programs of their own.

The purpose of Sociology 384 is to address this explosion of new methods and statistics by building a modular course featuring leading experts. The resulting course, which is offered as a concentrated two-week summer program, is designed for students who have already had initial exposure to the general linear model. It is taught in the form of eight one-day modules that introduce the new approaches. The topics covered in the course will vary from year to year. For the 2013 summer course, the following topics will be offered: Geographic information systems, new experimental methods (e.g., field experiments), network models, simulation models, new approaches to estimating causal effects, advanced regression methods, new methods for “scraping data” from the web, and new methods for qualitative analysis.

It is not of course possible in the context of a modular course of this sort to become fully proficient in any of the methods and statistics that are introduced. Rather, the objective is to familiarize students with the range of methods and statistics on offer, thereby allowing them (a) to read the journals with enough facility to understand and evaluate research that uses these methods and statistics, (b) to make informed, full-information decisions about how their own research agendas might best be designed and pursued, and (c) to know enough about particular methods and statistics to decide whether a more intensive course would serve them well.

The further distinctive feature of this course is that students will be encouraged to think carefully and explicitly about how these new methods and statistics might be harnessed for the purposes of their research. On Monday, July 8 (by midnight), students should submit an essay that develops one of the methods into a research proposal. The essays should be no more than 8 double-spaced pages and address each of the following questions: (a) the research hypothesis that will be addressed; (b) the data that will be used; (c) how the data will be analyzed (using of course the technique at hand); and (d) how the proposed research will advance the literature and thus constitute a contribution. The research proposals should not be fantasies but rather projects that are entirely viable given the real constraints of money, time, and data availability under which the students are operating. The objective, in other words, is to assist in the development of proposals that might actually be carried out (for research papers or
dissertations). Because students taking this intensive course will be working under extraordinary time constraints, it cannot of course be expected that proposals will be developed with a full appreciation of the relevant research literatures, but nonetheless some effort should be made to acquaint oneself with those literatures. It may be useful to approach the course with a research question already in hand and then devise projects that flexibly address that question from different methodological and statistical angles. Although this format may be viable for some students and some papers, it will not likely be viable for all. (NOTE: Please send the research proposals to Alice Chou at aychou@stanford.edu.)

**Course format and details**

*Session format:* The morning session (10am to 12noon) will typically introduce the relevant methods or statistics, while the afternoon session (12:30pm to 2:30pm) will typically (but not always) provide examples that illustrate how these methods or statistics have been or may be used.

*Omitting modules:* It is fine, indeed altogether appropriate, for students who have deep familiarity with one of the topics to elect to omit the relevant module. For students seeking course credit, up to three of the eight modules may be omitted. (If a student wishes to omit more than three modules, the course must instead be audited. The auditing option is not available for sociology graduate students unless the Director of Graduate Studies receives and grants a petition requesting an audit.)

*Readings:* We have sought to keep required readings to a manageable minimum. We will also provide a list of supplementary readings that may be consulted by students who wish to learn more. All readings will be available on CourseWork.

*Grading:* The papers will be graded on a scale ranging from 0 to 100. Final grades are either satisfactory (70 points or higher) or no credit (under 70 points).
Module 1 (Monday, June 24)
Time: 10am-12noon & 12:30pm-2:30pm
Topic: Advanced Regression Techniques
Instructor: Robert Andersen

Required reading


Module 2 (Tuesday, June 25)
Time: 10:45am-12:30pm & 1pm-2:30pm ****NOTE DIFFERENT STARTING TIME****
Topic: New Experimental Methods
Instructor: Robb Willer

Required readings


Suggested readings


Module 3 (Wednesday, June 26)
Time: 10am-12noon & 12:30pm-2:30pm
Topic: Geographic Information Systems
Instructor: Robert Parker

Required readings


Module 4 (Thursday, June 27)
Time: 10am-12noon & 12:30pm-2:30pm
Topic: New Methods and Approaches in Qualitative Analysis
Instructor: Corey Fields

Required materials


Suggested materials


Module 5 (Friday, June 28)
Time: 11:30am-1pm & 1:30pm-2:30pm ****NOTE DIFFERENT STARTING TIME****
Topic: New Models and Methods for Assessing Causality
Instructor: Cristobal Young

Required materials


Suggested materials


Module 6 (Monday, July 1)
Time: 10am-12noon & 12:30pm-2:30pm
Topic: Models and Methods for Analyzing Networks
Instructor: Dan McFarland

Required reading

Suggested reading
Module 7 (Tuesday, July 2)
Time: 10am-12noon & 12:30pm-2:30pm
Topic: Agent-based Computational Models and Social Simulation
Instructor: Michael Macy

Required readings

ftp://hive.soc.cornell.edu/mwm14/webpage/pdbu.pdf

http://www.journals.uchicago.edu/doi/pdf/10.1086/521848

http://www.jstor.org/discover/10.1086/588795

DJ Della Posta, Y Shi, and M Macy. "Why Do Liberals Drink Lattes?", unpublished manuscript (under review at *American Journal of Sociology*)
ftp://hive.soc.cornell.edu/mwm14/webpage/ll.pdf

Netlogo download: http://ccl.northwestern.edu/netlogo/download.shtml

Module 8 (Wednesday, July 3)
Time: 10am-12noon & 12:30pm-2:30pm
Topic: New Methods for Scraping Data from the Web
Instructor: Jeffrey Lewis

Required materials

http://polmeth.wustl.edu/tpm/tpm_v14_n2.pdf

http://polmeth.wustl.edu/tpm/tpm_v16_n1.pdf

A working installation of R (see http://cran.r-project.org/)

A working installation of python (see http://www.python.org/)
The Beautiful Soup extensions for python (see http://www.crummy.com/software/BeautifulSoup/)

The tamperdata plugin for Firefox (see http://tamperdata.mozdev.org/)

Some familiarity with regular expression syntax (see http://www.regular-expressions.info/)

**Monday, July 8**

Research proposal due (by midnight). Please send to Alice Chou (aychou@stanford.edu).