

# POLITICAL SCIENCE 150B/350B: POLITICAL METHODOLOGY 2

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This course offers an introduction to the use of statistical models in political science. The course will focus on regression analysis, the most frequently used tool in quantitative social science. The purpose of the course is to give students “hands-on” experience with regression analysis and a working knowledge of the underlying statistical theory. We will also consider extensions to the regression model to handle data that are not independent and identically distributed (e.g., panel data and data with other forms of longitudinal dependence), and models for data with discrete dependent variables.

This class traditionally attracts a broad constituency. For students thinking of themselves more as *consumers* of quantitative social science this course will provide the quantitative literacy essential to critically reading empirical research in political science and cognate disciplines. For future *producers* of quantitative social science this course will additionally provide data-analytic skills and preparation for further classes. Thorough familiarity with regression analysis is an indispensable prerequisite to more advanced data analytic techniques and statistical models; this course is a “gatekeeper” to further methodology courses in the Department and elsewhere around the University.

## ASSESSMENT

Assessment will be via

1. six or seven problem sets,
2. a mid-term examination, usually held on the Wed of Week 5 or the Monday of Week 6.
3. a final examination.

The exams will count for 50% of the grade for the course, and the problem sets for the remainder. The problem sets will typically involve short data analysis exercises with brief write-ups, while occasionally you will be required to work through proofs.

I **strongly** encourage students to form study groups in dealing with the homeworks and preparing the exams. This is extremely helpful given that this is not only a class about statistics, but also about *statistical practice*. Working in groups is a great way to learn your way around the software

and computing issues we will encounter. Nonetheless, some of the homeworks will be designated as “non-group” homeworks; this is so the exams will not be your first time “flying solo” with the material.

## TEXTS

I have ordered the following text through the Stanford Bookstore:

Weisberg, Sanford. 2006. *Applied Linear Regression*. 3rd edition. Wiley: Hoboken, New Jersey.

## SOFTWARE

I use and recommend the free package R. R is freely available over the web, such as [this CRAN](#).

## SCHEDULING CONCERNS

There will be no class on the following days:

1. Monday Jan 15: Martin Luther King Day (University holiday).
2. Monday Feb 19: President’s Day (University holiday).

Given that we also lose the Monday of Week 1, this means we lose 3 of our 20 possible lectures for the quarter. I propose at least one or two make-up classes (time and place to be worked out among us).