

The Statistics and Methods Sequences in Sociology

A Guide for New Graduate Students

Department of Sociology

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We are checking your transcripts and will send you individual emails regarding whether it appears you need to take elementary statistics (our 360) or undergraduate research methods (357), but there always needs to be some fine-tuning of these placements, and you should check with me or the statistics teachers if there are any doubts.

A. Statistics

The following overview of the Sociology statistics sequence (360, 361, and 362) is intended to help new graduate students decide which course might best suit them given their previous training. Although the exact content of the courses varies across different instructors, on the whole the descriptions below capture the core subjects of each course. If you are still uncertain about which statistics course you should start with, send email to halaby@ssc.wisc.edu. Indicate your highest level previous statistics course, the university where you took it, and the textbooks used (title and author). Sociology 360 is the “deficiency” course for those who haven’t taken an undergraduate equivalent course. Sociology 361 is required for the master’s degree and Sociology 361 and 362 are required for the Ph.D. You may request a waiver of the Sociology 361 requirement if appropriate. Fill out and return the enclosed course waiver request form.

Sociology 360

This is an introductory course intended for students with no prior training in statistics. It usually covers descriptive statistics (including prominently distributions, measures of location, and measures of spread); elementary probability theory; sampling theory; and finally elementary inference, including estimation of a population mean or the difference between two population means; and hypothesis testing about a population mean and about the difference between two population means. Sometimes 360 gives a very brief and elementary treatment of one-way analysis of variance and simple regression.

Sociology 361

The course is intended as an intermediate-level, more theoretical treatment of distributions, probability theory, the theory of random variables, sampling theory, and statistical inference. There is extensive coverage of different types of distributions (normal, binomial, poisson) and statistical models, including one- and two-way analysis of variance, simple and multiple regression, and models for tabular categorical data.

Sociology 362

This course assumes some familiarity with the fundamental principles of the theory of random variables and the analysis of variance; some previous exposure to regression is also helpful. Given that background, the course gives a rigorous treatment of regression modeling, including topics such as multiple regression, advanced hypothesis testing, dummy variables, analysis of covariance, binary and multinomial logistic regression, ordered logistic regression, and likelihood ratio tests.

B. Methods

Undergraduate equivalent, 357. As taught here by most instructors, this course emphasizes quantitative data collection (observation, survey, experiment), elementary analysis (percentages, means), analyzing published research articles, and writing research reports. The logic of variables, relationships, propositions, hypothesis testing, experimental design and sampling theory are covered at an elementary level. Students who have had a quantitatively-oriented methods course in sociology, psychology, political science or other social science are usually waived out of this course. If you have had no methods training or only qualitative methods, you should probably take this course. In our cover letter, we have indicated whether we think you need this course based on the transcripts we have available. Consult with Pam Oliver if you disagree with this assessment, are uncertain about your background, or if you feel you have had the equivalent in hands-on research experience.

Graduate methods, 750. This course will be taught in the spring semester. Only students entering the program with a master's or extensive prior graduate training should consider enrolling in this course in their first year. This course presupposes advanced statistics (362). It is a PhD-level (not master's-level) course and is almost never waived, even for students who have taken graduate methods courses elsewhere. The instructor, Jeremy Freese, has posted a copy of last year's syllabus on his web page at www.ssc.wisc.edu/~jfreese.