

## Sociology 319: Sociology of Science

Professor: Charles Camic  
c-camic@northwestern.edu

TA: Rim Naguib  
rimnaguib2008@u.northwestern.edu

Office Hours: Thursday 2:00 - 3:00

### Course Description

This course seeks to provide a general introduction to the sociology of science, the subfield of sociology concerned with the social organization of scientific institutions, the social process by which such institutions historically emerged, and the social processes that underpin contemporary scientific research and the development and diffusion of scientific ideas. Sociologists and scholars in related fields have extensively investigated these topics using different theoretical and methodological approaches. In examining the work of these scholars, the course will highlight their theoretical and methodological differences.

### Requirements and Grading

Course grades are determined on a 100-point basis. The sources of these points are as follows.

- Participation. General contribution to class discussion of assigned readings. *Possible points: 20.*
- “Call Day” Contribution. (See explanation below.) *Possible points: 20.*
- Short Paper. 6-8 page paper comparing the reading assignments from two different weeks of the quarter (due: start of class period, March 4). *Possible points: 30*
- Final Exam. In-class short-answer-plus-essay exam, cumulative in coverage. *Possible points: 30.*

At the end of the quarter, the instructor will add up the total score for each student, plot the class distribution of total scores, and use the resulting curve to assign a final letter grade.

*Explanation of “Call Day” Contribution.* On the first day of class, a sheet will circulate that lists the dates of all class sessions. Each participant in the course will sign up for one of these dates. On that date, she or he will be “on call” to do two things: (i) address a series of questions that the instructor will pose about the day’s reading assignment; and (ii) prepare in writing 2-3 short questions or critical observations about the day’s assignment. (Insofar as time permits, the instructor will ask persons on call to raise their questions/criticisms to the class; questions/criticisms are also to be submitted to the instructor at the end of class.) In selecting a date to be on call, participants should bear in mind that, depending on the dynamic of a given class meeting, their time on call for a particular assignment may spill over into class session that follows the date they have selected.

## Readings

Reading assignments are contained in a reading packet (hereafter abbreviated RP) on sale at Quartet Copies (825 Clark St.) and in the following nine books on sale at the Norris Center Bookstore.

David Bloor, *Knowledge and Social Imagery* (2nd edition)

H.M. Collins, *Changing Order: Replication and Induction in Scientific Practice*

Steven Epstein, *Inclusion: The Politics of Difference in Medical Research*

Sheila Jasanoff, *Science at the Bar: Law, Science, and Technology in America*

Thomas Kuhn, *The Structure of Scientific Revolutions* (3rd edition)

Michele Lamont, *How Professors Think: Inside the Curious World of Academic Judgment..*

Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society*

Bruno Latour, and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (revised edition)

Sharon Traweek, *Beamtimes and Lifetimes: The World of High Energy Physicists*

## Schedule of Topics and Reading Assignments

January 5	Introduction
January 7	The Origins of Modern Science <ul style="list-style-type: none"><li>(i) Joseph Ben-David, Selections from <i>The Scientist's Role in Society</i>, RP</li><li>(ii) Robert Merton, "The Puritan Spur to Science," RP</li></ul>
January 12-14	Scientific Institutions: Normative Structure and Processes <p><i>Assignment for January 12:</i></p> <ul style="list-style-type: none"><li>(i) Robert Merton, "The Normative Structure of Science," RP</li><li>(ii) Robert Merton, "Priorities in Scientific Discovery," RP</li><li>(iii) Robert Merton, "The Matthew Effect in Science" RP</li><li>(iv) Sergio Sismondo, "Questioning Functionalism in the Sociology of Science," RP</li></ul>
January 19-21	Scientific Revolutions <p><i>Assignment for January 19:</i></p> <p>Thomas Kuhn, <i>The Structure of Scientific Revolutions</i></p>
January 26	The "Strong Program" in Science Studies <ul style="list-style-type: none"><li>(i) David Bloor, Selections from <i>Knowledge and Social Imagery</i>, 3-54, 84-118, 135-38, 146-56</li><li>(ii) Donald MacKenzie, Selections from <i>Statistics in Britain, 1865-1930: The Social Construction of Scientific Knowledge</i>, RP</li></ul>
January 28	Scientific Rhetoric <ul style="list-style-type: none"><li>(i) G. N. Gilbert, and M. Mulkey, Selections from <i>Opening Pandora's Box: A Sociological Analysis of Scientists' Discourse</i>, RP</li><li>(ii) Greg Myers, "Texts as Knowledge Claims: The Social Construction of Two Biology Articles," RP</li></ul>
February 2	Scientific Controversies <p>H. M. Collins, <i>Changing Order: Replication and Induction in Scientific Practice</i></p>

- February 4-9            Inside Scientific Institutions and Laboratories
- Assignment for February 4:*
- Sharon Traweek, *Beamtimes and Lifetimes: The World of High Energy Physicists*, pp. 1-105, 126-56
- Assignment for February 9:*
- Bruno Latour, and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts*, pp. 15-258
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- February 11-16        Moving beyond the Scientific Laboratory
- Assignment for February 11:*
- Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society*, pp. 1-176
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- February 18-25        Science and Social Policy
- Assignment for February 18:*
- Sheila Jasanoff, *Science at the Bar: Law, Science, and Technology in America*, pp. xiii-159, 204-226
- Assignment for February 23:*
- Steven Epstein, *Inclusion: The Politics of Difference in Medical Research*, pp. 17-154
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- March 2-4              Beyond the Natural Sciences
- Assignment for March 2:*
- Michele Lamont, *How Professors Think Inside the Curious World of Academic Judgment*, pp. 1-201
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- March 4                Papers Due