Experimental Methods in Social Science Research*

MA Course, Summer 2019†

Last updated: April 3, 2019

Time: Wednesdays, 16:15–17:45, from April 03 to July 10.
Location: FVG Building, Room M0160.

Instructor:
Bastian Becker, PhD
SOCIUM – Research Center on Inequality and Social Policy
Email: bastian.becker@uni-bremen.de
Phone: +49 (0)421 218 58605
Office hours: by appointment
Office: Mary-Somerville-Straße 3, Room 3.4330 (4th floor)

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1 Course Description

This course introduces students to how experiments are used to address questions about social phenomena. Social science research and policy analysis have in recent years put greater emphasis on the causes underpinning phenomena of interest. This is an important advance as the lack of doing so can lead to erroneous substantive conclusions and policy recommendations. Experiments are well-suited for the identification of causal effects, as they give researchers control over the research setting and thus allow them to exclude alternative explanations. The course focuses on introducing students to basic concepts and analytical tools employed in experimental research. Students are also acquainted with different experimental research designs, including lab, survey, and field experiments.

Goals

At the end of the course, students will possess a good understanding of the strengths (and weaknesses) of the experimental methods most commonly used in social science research. They will therefore be able to critically assess applications of these methods. A capacity to design experiments and analyze experimental data independently is fostered through various exercises, including the writing of a research plan.

*Preliminary, might be subject to minor changes.
†Open to BA students, see prerequisites.

Prerequisites

Prior knowledge of basic statistical concepts, such as hypothesis testing and regression analysis, is necessary. Ideally, students have attended an introductory statistics before. BA students fulfilling these prerequisites are welcome to join the course.

Software

All studens should have `RStudio` installed on their computers before the fourth session (no prior knowledge required). `RStudio` is a user-friendly interface for the statistical software `R`, with integration to other packages we will use throughout the course. It is available for free at https://www.rstudio.com/. Ideally students bring their own laptops to class (session 4-8), but working in pairs is also possible.

2 Course Requirements

Students will be assessed based on the following exercises (all are mandatory to pass the course):

- **Problem sets (one for 3CP, two for 6CP).** Two take-home problem sets will be posted during the semester, with one week to complete each of them. These will consist of knowledge questions and small analytical tasks. Students taking the 3CP-version of the course only have to complete one of the two problem sets.
- **Research plan (all).** Students have to write a research plan. These plans have to be based on a pre-analysis template.[1] The last session of the course will include a research plan workshop, where students will exchange intial ideas about their research plans All research plans have to be submitted no later than 6 weeks after the last session.

Grading

All assignments are graded on a 100-point scale. For the final grade, points are weighted and summed as follows. For the 3CP-version of the course: problem set (30%), research plan (70%), plus bonus points (see below). For the 6-CP version: problem sets (2*20%), research plan (60%), plus bonus points (see table). Points are converted to final grades as indicated in the table below. Submission is by email, with documents in pdf-format and your name as the file name.

Bonus points

All students are encouraged to submit, by email, up to three questions about the weekly readings to the instructor (between weeks 2 and 12), before noon on the day of the seminar (subject line: *Exp Methods Questions*). If one of your questions is selected for discussion in class, you earn one bonus point that week. This bonus point will be added to your final score.

[1] Pre-analysis plans, sometimes called pre-registration plans, are research plans that are specified in advance of any data collection. Their goal is to reduce researcher bias and to improve scientific practice.

Points	Grade
100–96	1.0
95–91	1.3
90–86	1.7
85–81	2.0
80–76	2.3
75–71	2.7
70–66	3.0
65–61	3.3
60–56	3.7
55–51	4.0
50–0	5.0

Late Submission

Submissions that are up to 12 hours late are downgraded by one full grade (e.g. from 1.7 to 2.7), between 12 and 24 hours by two full grades. Submissions after more than 24 hours are not accepted. Exceptions are granted only in the case of illness and personal emergencies (these must be communicated as early as possible).

E-learning

Important updates, texts, and scripts are shared by the instructor through the unversity's e-learning platform, STUD.IP (https://elearning.uni-bremen.de). All particpiants need to enroll for the course on the platform in order to successfully complete the course. It is their responsibility to check for updates and announcements, at least on a weekly basis.

Academic Integrity

Academic community builds on original scholarly work and a constant exchange of ideas. It is therefore imperative to fully acknowledge one's use of other people's work, be it as a quotation or by paraphrasing it. Failure to acknowledge any source, also called plagiarism (see https://en.wikipedia.org/wiki/Plagiarism), leads to downgrading and possibly failure of the course (please consult your Prüfungsordnung ["examinations regulations"] for details). Specialized software makes it extremely easy to discover plagiarism! Note that plagiarism includes copying from your classmates.

Proper acknowledgement is done by citing the respective source, indicating the name(s) of the authors or institutions and date of publication. A reference list at the end of your document then lists details of all citations, e.g. names, dates, title of publication, publisher. There are different citation styles. I recommend the widely used Harvard style (see https://en.wikipedia.org/wiki/Harvard_style), but you may use any other as long as you use it consistently.

3 Readings

Two books serve as the main background reading for this course,

- Gerber, A. & Green, D., 2012, *Field Experiments*, W.W. Norton & Company (henceforth, "Gerber & Green"), and

- J. Druckman, D. Green, J. Kuklinski, & A. Lupia (Eds.), 2012, *Cambridge Handbook of Experimental Political Science*, Cambridge University Press (henceforth, "Handbook").

Gerber & Green is available in the university library (3rd Floor, "Semesterapparat" P02 Becker), and *Handbook* is available online through the university network, (doi:10.1017/CBO9780511921452). If you get your own copy, make sure you get the same edition that we use for the course.

Readings are to be completed before each class as listed in the schedule. Further recommended readings are marked with a star (*), all other readings are mandatory.

4 Schedule

Session 1: Welcome (Apr 03)

READINGS

- Druckman, J., Green, D., Kuklinski, J., & Lupia, A. (2011). Experimentation in Political Science. In *Handbook* (pp. 3-12). doi:10.1017/CBO9780511921452.001

Session 2: The Basic Logic of Experimental Research (Apr 10)

READINGS

- Druckman, J., Green, D., Kuklinski, J., & Lupia, A. (2011). Experiments. In *Handbook* (pp. 15-26). doi:10.1017/CBO9780511921452.002

** *Easter Break* **

Session 3: Validity of Social Science Experiments (Apr 24)

READINGS

- McDermott, R. (2011). Internal and External Validity. In *Handbook* (pp. 27-40). doi:10.1017/CBO9780511921452.003

** *Labor Day* **

Session 4: Thinking in Potential Outcomes: The Measurement of Treatment Effects (May 8)

READINGS

- Green & Gerber, Chapter 2.

Session 5: Just by Chance? Uncertainty about Treatment Effects (May 15)

READINGS

- Green & Gerber, Chapter 3.

ASSIGNMENTS

- Problem set 1, due 23:59 before next session.

Session 6: On the Ir/relevance of Covariates in Experimental Research (May 22)

READINGS

- Green & Gerber, Chapter 4.

Session 7: Challenges for Experimental Research, Non-compliance (May 29)

READINGS

- Green & Gerber, Chapter 5.

Session 8: Challenges for Experimental Research, Attrition (Jun 5)

READINGS

- Green & Gerber, Chapter 7.

ASSIGNMENTS

- Problem set 2, due 23:59 before next session.

Session 9: Replication Crisis and Scientific Practice (Jun 12)

READINGS

- Monogan, J. (2015). Research Preregistration in Political Science: The Case, Counterarguments, and a Response to Critiques. PS: Political Science & Politics, 48(3), 425-429. doi:10.1017/S1049096515000189

Session 10: Experimental Research Designs, Lab Experiments (Jun 19)

READINGS

- Iyengar, S. (2011). Laboratory Experiments in Political Science. In *Handbook* (pp. 73-88). doi:10.1017/CBO9780511921452.006

* Horton, J. J., Rand, D. G., & Zeckhauser, R. J. (2011). The online laboratory: conducting experiments in a real labor market. *Experimental Economics, 14(3)*, 399–425. doi:10.1007/s10683-011-9273-9

Session 11: Experimental Research Designs, Survey Experiments (Jun 26)

READINGS

- Gaines, B. J., Kuklinski, J. H., & Quirk, P. J. (2007). The Logic of the Survey Experiment Reexamined. *Political Analysis, 15(01)*, 1–20. doi:10.1093/pan/mpl008

* Hainmueller, J., & Hopkins, D. J. (2015). The Hidden American Immigration Consensus: A Conjoint Analysis of Attitudes toward Immigrants. *American Journal of Political Science, 59(3)*, 529–548. doi:10.1111/ajps.12138

Session 12: Experimental Research Designs, Field Experiments (Jul 3)

READINGS

- Humphreys, M., Weinstein, J. M. (2009). Field Experiments and the Political Economy of Development. *Annual Review of Political Science, 12*, 367-378. doi:10.1146/annurev.polisci.12.060107.155922

* De La O, A. L. (2013). Do Conditional Cash Transfers Affect Electoral Behavior? Evidence from a Randomized Experiment in Mexico. *American Journal of Political Science, 57*, 1-14. doi:10.1111/j.1540-5907.2012.00617.x

Session 13: Research Plan Workshop and Course Wrap-up (Jul 10)

READINGS

- *None*

ASSIGNMENTS

- Research plan, due August 21, 23:59.