

**EDP 384: Research Design and Methods for Psychology and Education**  
**Spring 2014, Tues/Thur, 9:30 - 11:00 am**  
**SZB 444**

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### **Overview**

This course will introduce essential concepts and methods used in quantitative empirical research in the fields of education and psychology, in order to prepare students both to be informed consumers of research and to conduct high-quality empirical research of their own. Though the focus is predominantly on quantitative methods, qualitative perspectives will also be presented as counter-points. The course is organized around four main themes: measurement, populations and sampling, experimental causal research, and quasi-experimental causal research. On each theme, we will read relevant theoretical/methodological literature, discuss empirical research in light of those concepts, and develop research proposals using the methods that we discuss. Throughout, emphasis will be placed on building intuition and heuristics regarding research designs and methods, rather than mastering technical details, though some essential statistical concepts will be introduced.

### **Readings**

All readings will be posted on Canvas.

### **Research proposals and peer reviews**

A major component of this course involves developing short (3-4 page), realistic research proposals that use the methods and tools covered under each theme of the course. Students will develop initial drafts of their proposals, submit them for feedback from their peers, and then revise and resubmit final drafts. Only the final drafts of the proposals will be graded.

### **Writing**

It is expected that the research proposals will be well composed, following the style and tone of an academic paper. Students who need assistance with their writing are encouraged to seek help from the Sanger Learning Center

(<http://www.utexas.edu/ugs/slc/grad>), which offers free tutoring services for graduate students.

You will need to cite other scholarly work in your assignments, following APA6 format. I highly recommend using reference management software such as [Microsoft EndNote](#), [Zotero](#), or [Mendeley](#). Software like this will make it much easier to format your citations and reference lists.

## **Evaluation**

- Class participation (10%). Students are expected to attend each meeting and to be informed, active participants in class discussions. Besides asking and answering questions during class discussions, other modes of participation include coming to office hours to discuss the course material (but not to discuss grades) and posting thoughtful questions or responses in the online discussion board for the class. Class participation will be evaluated based on my global impression over the entire semester.
- Homework (15%). Periodic homework will consist mostly of short (~1/2 page) essays and exercises to check your comprehension of the reading. Homework must be submitted electronically (via Canvas) by the time and date listed. Late submissions will be marked down 20% per day.
- Proposals (60%). There will be five proposals in all. Each proposal has two due-dates: one for a draft that will be distributed for peer feedback and a second for a final draft. Late submissions on the first draft will lose the benefit of peer review, and will lead to final drafts being marked down 20% per day. Late submissions on the final draft will be marked down 20% per day.
- Peer reviews (15%). Students' reviews of their peers' proposals will be evaluated for thoroughness, relevance, and constructiveness. Late submissions will not be accepted.

## **Academic integrity and plagiarism**

Following the University's honor code, students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work. Assignments and exams must be completed with the utmost honesty, which includes acknowledging the contributions of other sources to your scholastic efforts; avoiding plagiarism; and completing assignments independently unless expressly authorized otherwise. ***Homework assignments or proposals containing any plagiarized material will not be accepted.***

## **ADA accommodations**

The University of Texas at Austin provides upon request appropriate accommodations for qualified students with disabilities. For more information, please contact the Office of the Dean of Students at 471-6259, 471-4671 TTY.

## **Tentative Schedule**

### ***Introduction***

- 1/14 – Course introduction
- 1/16 – Proposing, summarizing, and critiquing research

### ***Measurement***

- 1/21 – Construct validity
- 1/23 – Reliability
- 1/28 – Instrument design
- 1/30 – Associational research
- 2/4 – Effect sizes
- 2/6 – Qualitative counterpoint: Clinical interviews, cognitive interviews
- 2/11 – Discussion of measurement instruments

### **Populations and sampling**

- 2/13 – External validity, probability sampling
- 2/18 – Stratification
- 2/20 – Two-stage (cluster) sampling and complex sampling
- 2/25 – Missing data
- 2/27 – Criticisms of probability sampling
- 3/4 – Discussion of survey proposals

### **Causal research: Randomized experiments**

- 3/6 – Simple randomized experiments
- 3/11 – No class (Spring Break)
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- 3/18 – Internal validity, causal models
- 3/20 – Power, block-randomization and covariate adjustment
- 3/25 – Discussion of proposed lab experiments
- 3/27 – Cluster-randomized designs
- 4/1 – Field issues: attrition
- 4/3 – Field issues: compliance & fidelity
- 4/8 – Criticisms of the experimental paradigm
- 4/10 – Discussion of proposed field experiments

### **Causal research: Quasi-experiments**

- 4/15 – Regression discontinuities
- 4/17 – Interrupted time series
- 4/22 – Single-case designs
- 4/24 – Statistical adjustment
- 4/29 – Matching and balancing
- 5/1 – Discussion of quasi-experiment proposals