

MEJO 862 Experimental Design

Spring 2020

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Meeting Time: Tuesday 12:30-3:15pm in 340A, Carroll Hall.

Office Hours: Thursday 1:45-2:45pm and by appointment.

Course Overview: This course will focus on the methodological and design issues to enable you to fully design and conduct an experiment. Rather than just reading about controlled experiments and field experiments, single factor experiments and factorial designs, manipulation checks, etc., we will walk through the steps in deciding which of these elements is best used in the creation of your own experiment, including making the stimuli and questionnaire, submitting an IRB application, etc. By the end of the semester you will run your own experiment. It is important to note that this class differs from experimental design course offered from other departments, such as psychology, which deal primarily with analyzing data with various statistics. While we will cover this aspect briefly, the inner workings of the statistics and formulas will not be part of this class; you should take a traditional experimental design class to complement the conceptual knowledge gained in this course if desired.

Required Reading:

1. Bausell, R. B. (1994). *Conducting Meaningful Experiments: 40 Steps to Becoming a Scientist*. Los Angeles: Sage.
2. Coleman, R. (2019). *Designing Experiments for the Social Sciences: How to Plan, Create, and Execute Research Using Experiments*. Los Angeles: Sage.
3. Readings posted on the reading list, handed out during class, or available online.

Optional Reading (*highly recommended for those planning a career with experiments*):

1. Shadish, W.R., Cook, T. D., & Campbell, D.T. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Belmont, CA: Wadsworth.

Course Work & Grading:

Assignment	Weight
Reflection papers	15%
Weekly assignments (7)	30%
Final paper	45%
Class participation	10%

Reflection papers:

You will submit a total of 3 one-page reflection or thought papers that analyzes and synthesizes an idea (or ideas) in one or more of the course readings for that week. All reflection papers must be submitted before the beginning of class and you *must* attend the class on the day you submit for it to be accepted. No late acceptances. There are 11 weeks of assigned or optional reading. You may choose to do the reflection papers any week. Only one reflection paper for the week's assigned reading allowed.

The purpose of these papers is to give you the opportunity to think, and more importantly write, about insights gained from the readings so that you will meaningful contribute to the class discussion and further progress on your study. You may critique the reading, write about questions you have, or any other angle you would like. This is not a summary though. Do not summarize any of the readings. Pick a topic and write the whole paper on it. You will get a better assessment for one in-depth topic than 2 (or more) superficial ones. This is your opportunity to demonstrate your ability for critical thinking.

Weekly assignments:

There are 7 weekly assignments: 3 ideas, literature review, hypotheses, sampling strategy, stimuli and manipulation check, questionnaire, and IRB application. These are opportunities to build and get feedback on your design prior to conducting the experiment and submitting the final paper.

Final experimental design paper:

The final paper and presentation should demonstrate the culmination of the entire semester's work. This is a standard research paper suitable for a conference submission. The paper should be no longer than 7000 words (or less if norm in your subfield) and include: introduction, theory and literature review, hypotheses, a complete methods section, results, and a discussion. This paper is expected to be of much higher quality than the weekly assignments. It needs to be clearly and concisely written and suitable to a peer-review submission process. With permission and sufficient rationale, proposals written up to the results section may be accepted.

Grade scale: High pass (H), Pass (P), Low pass (L), Fail (F)

Grade categories are defined as:

- H - The work is intellectually rigorous, shows an exceptional understanding of the material and is error free. **Accept for publication with minor revisions.**
- P - The work illustrates a good effort at understanding the material and has few errors. **Revise-and-resubmit.**
- L - The work indicates little progress toward gaining an understanding of the material and has substantial errors. **Reject.**
- F - The work shows no understanding of the assignment or was not completed in a timely manner.

Schedule: The schedule includes the main topics for each week and the reading required for the meeting. Students are expected to have completed the assigned readings BEFORE coming to class. **Note:** Based on your input and our progress, I reserve the right to amend and change the syllabus, reading schedules, and assignments during the semester.

Week	Dates	Topic, Reading, & Assignments
1		NO MEETING – School starts Wednesday, 1/8
2	1/14	INTRODUCTION & HISTORY OF EXPERIMENTS Assignment due next Wed (week 3, 1/21): 3 ideas for an experiment you would like to conduct. Clear and concise statement of the problem, why it is important to scholars, practitioners, society. 250 words per idea.
3	1/21	OVERVIEW OF EXPERIMENTS, THEORY, & LITERATURE Read: Bausell Ch. 1 & 2; Coleman Ch. 1; Potter, 2018; Thorson, Wicks, & Leshner, 2012; <i>optional</i> Shadish, Cook, & Campbell, Ch. 1 & 8 Assignment due this week: 3 ideas Assignment due in two Tuesdays (week 5, 2/4): Revise 1 approved idea, add ~5 pages of theory and literature review.
4	1/28	EXPERIMENTAL DESIGNS & VARIABLES Read: Coleman Ch. 3, 4, & 6; Baron & Kenny 1986; Spencer, Zanna, & Fong 2005; Stevens 2012; optional Shadish et al., Ch. 11 & 12 Assignment due this week: None
5	2/4	VALIDITY, RANDOMIZATION, & HYPOTHESES Read: Bausell Ch. 3 & 4; Coleman Ch 5 & 7; Coleman 2006; Mook 1983; Ho 2008; Smith, Levine, Lachlan, & Fediuk 2002; <i>optional</i> Shadish et al., Ch. 2, 3, & 14 Assignment due this week: Revised idea with literature review Assignment due next Wednesday (week 6, 2/11): 3+ Hypotheses and any Research Questions
6	2/11	EFFECT SIZES & SAMPLING Read: Bausell 5 & 6; Coleman Ch. 8; Basil, Brown, & Bocarnea 2002; Cohen 1992; Courtright 1996; Crump, McDonnell, & Gureckis 2013; Lang 1996; O'Keefe 2017; Sheehan 2017; VanVoorhis & Morgan 2007 Assignment due this week: 3+ Hs and any RQs Assignment due next Wednesday (week 7, 2/18): Write up the sampling strategy for your study including a power analysis.
7	2/18	MEASUREMENT & STIMULI DESIGN Read: Coleman Ch. 9; Jackson & Jacobs 1983; O'Keefe 2003; Tao & Bucy 2007 Assignment due this week: Sampling strategy

		Assignment due in two Wednesdays (week 9, 3/3): Design your stimuli and write description of stimuli development.
8	2/25	MANIPULATION CHECKS, PRETESTS, & PILOT STUDIES Read: Bausell Ch. 7-9; Arpan, Baker, Lee, Jung, Lorusso, & Smith 2006
		Assignment due this week: None Assignment due next Wednesday (week 9, 3/3): <i>Reminder: Design your stimuli and write description of stimuli development.</i> Make sure to include your manipulation check for your study (& pretest if applicable).
9	3/3	QUESTIONNAIRES & PROCEDURES Read: Coleman 10; Coleman, Thorson, & Wilkins 2011; <i>optional</i> Shadish et al., Ch. 4 & 5
		Assignment due this week: Stimuli and manipulation check Assignment due in two Wednesdays (week 11, 3/17): Design your questionnaire.
10		SPRING BREAK
11	3/17	ETHICS & WRITING UP METHODS Read: Coleman Ch. 11; <i>optional</i> Shadish et al., Ch. 9 (Optional) Select any two peer-reviewed, experiment design journal articles, analyze and critique the methods section write-up. Is there a pattern that you prefer (e.g., order of stimuli, sample, procedure, etc.)? Is there enough information to replicate the study? Is one method section better than the other? If yes, why? This purpose of this thought paper should be to closely read and think critically about how methods sections are written (well and/or poorly).
		Assignment due this week: Questionnaire Assignment due next Wednesday (week 12, 3/24): Complete an IRB application.
12	3/24	ANALYZING & INTERPRETING DATA Read: Cassidy et al., 2019; Levine 2002; Levine 2013; O'Keefe 2007
		Assignment due this week: IRB application
13	3/31	WRITING UP RESULTS Read: (Optional) Select any two experimental design studies, analyze and critique the way the results are written in the same manner as done for methods.
		Assignment due this week: None

14	4/7	CONSULTATIONS – See schedule on Sakai Assignment due this week: None
15	4/14	CONSULTATIONS – See schedule on Sakai Assignment due this week: None
16	4/21	FINAL PRESENTATIONS Prepare a presentation with visuals a la AEJMC or ICA conference. No longer than 10 minutes. You will be timed. Questions from the audience immediately after each presentation. Final papers due – Friday, May 1, 2020 by 12:00pm

Honor Code: I expect that each student will conduct himself or herself within the guidelines of the University honor system (<http://honor.unc.edu>). All academic work should be done with the high levels of honesty and integrity that this University demands. You are expected to produce your own work in this class. If you have any questions about your responsibility or your instructor's responsibility as a faculty member under the Honor Code, please see the course instructor or Senior Associate Dean Charlie Tuggle, or you may speak with a representative of the Student Attorney Office or the Office of the Dean of Students.

Seeking Help: If you need individual assistance, it's your responsibility to meet with the instructor. If you are serious about wanting to improve your performance in the course, the time to seek help is as soon as you are aware of the problem – whether the problem is difficulty with course material, a disability, or an illness.

Diversity and Inclusion: Our school adopted [diversity and inclusion mission and vision statements](#) in spring 2016 with accompanying goals. It complements the University policy on [Prohibiting Harassment and Discrimination](#). In summary, UNC is committed to providing an inclusive and welcoming environment for all members of our community and does not discriminate in offering access to its educational programs and activities on the basis of age, gender, race, color, national origin, religion, creed, disability, veteran's status, sexual orientation, gender identity, or gender expression.

Special Accommodations: If you require special accommodations to attend or participate in this course, please let the instructor know as soon as possible. If you need information about disabilities visit the Accessibility Services website at <https://accessibility.unc.edu/>

ACCREDITATION: Our school's accrediting body outlines a number of values you should be aware of and competencies you should be able to demonstrate by the time you graduate from our program. Learn more about them here:

<http://www2.ku.edu/~acejmc/PROGRAM/PRINCIPLES.SHTML#vals&comps>

No single course could possibly give you all of these values and competencies; but collectively, our classes are designed to build your abilities in each of these areas. In this class, we will address a number of the values and competencies, with special emphasis on these six bullet dots under "Professional values and competencies" in the link above.

- Demonstrate an understanding of the history and role of professionals and institutions in shaping communications;
- Understand concepts and apply theories in the use and presentation of images and information;
- Think critically, creatively and independently;
- Conduct research and evaluate information by methods appropriate to the communications professions in which they work;
- Write correctly and clearly in forms and styles appropriate for the communications professions, audiences and purposes they serve;
- Apply tools and technologies appropriate for the communications professions in which they work.