20.834.562.02 APPLIED RESEARCH DESIGN
FALL 2016

INSTRUCTOR
Javier Fuenzalida
Room 303, Center for Urban Public Service (CSP)
111 Washington St, Newark NJ 07102
Email: javier.fuenzalida@rutgers.edu

COURSE OBJECTIVES

Building on the skills of data analysis and inference learned in Applied Statistics (20:834:561), this course exposes students to issues central to understanding and applying modern research to public policy and administration. These issues include the use of theory and models, measurement concepts and methods, qualitative and quantitative modes of observation, identifying causes, the logic of control variables, and the design of experiments and quasi-experiments. The emphasis is on learning these ideas through practice with many different examples of real-world research and empirical evidence.

STUDENT LEARNING OUTCOMES

The objective of this course is to (i) analyze, synthesize, think critically, make decisions and solve problems on issues related to public policy and administration. By doing so, students will be able to (ii) participate and contribute to the policy making on such affairs. In order to achieve these purposes, the course is intended to contribute developing the following qualifications on its participants:

- Understand the theoretical and practical underpinnings of research design
- Identify common research methodologies, comprehend their differences, and how to use them
- Be able to use and produce research evidence for public policy purposes

REQUIRED BOOKS AND MATERIALS

- Remler, D. K. & Van Ryzin, G. G. (2015). *Research Methods in Practice: Strategies for Description and Causation*. (1st edition). SAGE Publications.
- During the course, Excel and Stata will be regularly used. Previous knowledge on these statistical packages is not required, however, it is expected students will learn how to use them during the course.

GRADING

10% Class attendance and participation

40% Quizzes. 30-minutes quizzes will be administered in some classes, which will ask about concepts reviewed in class and/or to solve assigned exercises. I will consider just the 4 best grades out of 5 quizzes. Please note that there is no make-up quiz if you miss a class.

30% Research proposal. During the semester, students will gradually work on a research proposal by submitting three reports and a final manuscript. The idea is to use this opportunity to design their capstone projects, although students might also work on other research projects of their interest.

20% Practice sessions. Four labs will be offered during the semester. They will serve as a way to refresh some concepts about descriptive and inferential statistics, as well as to strengthen students' skills on Excel and Stata.

Optional homework. Some exercises from the textbook will be assigned as optional homework on a weekly basis. Although developing these exercises is not mandatory, I usually include one of them (or similar) on the Quiz.

POLICIES

Syllabus. Please consider this document as a general outline. I reserve the right to deviate from any part of the plan as necessary. Students will be notified of any such modifications.

Grade Disputes. If students have a grade dispute, they should submit a one-page memo to the instructor presenting evidence for their case. The instructor will review and reconsider the original assignment. This review may lead to a grade increase but equally may lead to a grade decrease based on the new overall evaluation.

Class Etiquette. In order to make the class as enjoyable as possible for everyone, cell phones should be turned off during the class. Reading outside material, talking during lectures, leaving the classes early, text messaging, emailing, and surfing the web for non-class-related websites are prohibited in class. In addition, please arrive class on time.

Disabilities. Those with any form of disability should inform me during the first week of class so that I may make reasonable accommodations where necessary.

Academic Integrity. You will be held to the very highest standard of academic integrity in this course. You are required to read "Rutgers University Academic Integrity Policy" here: http://academicintegrity.rutgers.edu/files/documents/AI_Policy_9_01_2011.pdf. In addition to those policies, and as future or current members of the civil service, students are expected to show the highest ethical standards during the course.

SCHEDULE

W	Date	Activities	Class topic	Readings	Optional readings
1	09-10		Introduction and overview	R&VR: Ch 1	
2	09-17	Practice Session 1. *Descriptive statistics and graphs on Excel*	Theory and models	R&VR: Ch 2 & Ch 8	Kaplan, S. A., & Garrett, K. E. (2005). The use of logic models by community-based initiatives. *Evaluation and Program Planning*, 28(2), 167-172.
3	09-24	Quiz 1	Qualitative research	R&VR: Ch 3	LeCouteur, E. (2004). *New York's Disaster Relief Medicaid: What Happened When It Ended? A Focus Group Study*. New York: The Commonwealth Fund.
4	10-01	Research Proposal Report 1. *Problem, purpose, questions, theory and model*	Measurement	R&VR: Ch 4	
5	10-08	Practice Session 2. *Sampling on Excel*	Sampling	R&VR: Ch 5	Lohr, S. (2009). Introduction. In *Sampling: Design and Analysis* (pp. 1 - 24). Cengage Learning
6	10-15	Quiz 2	Primary data collection: Surveys and observation	R&VR: Ch 7	
7	10-22	Practice Session 3. *Inferential statistics on Excel*	Secondary data	R&VR: Ch 6 & Ch 9	
8	10-29	Research Proposal Report 2. *Data, research setting, interview protocol/survey*	Causation	R&VR: Ch 10	
9	11-05	Quiz 3	Observational studies (control variables)	R&VR: Ch 11	Lance, K. C., & Hofschire, L. (2011). Something to shout about: New research shows that more librarians means higher reading scores. *School Library Journal*, 57(9), 28-33.
10	11-12	Reading Week	Observational studies (control variables)	R&VR: Ch 9 & Ch 11	Der, G., Batty, G. D., & Deary, I. J. (2006). Effect of breast feeding on intelligence in children: prospective study, sibling pairs analysis, and meta-analysis. *BMJ*, 333(7575), 945
11	11-19	Practice Session 4. *Multivariate regression on Stata*	Observational studies & Regression	R&VR: Ch 9 & Ch 11	
12	11-26	Thanksgiving recess (no class)			
13	12-03	Quiz 4 Research Proposal Report 3. *Methods*	Randomized experiments & natural and quasi experiments	R&VR: Ch 12 & Ch 13	TBD (examples of experiments)
14	12-10	Quiz 5	The politics, production and ethics of research	R&VR: Ch 14	Michael J. LaCour case

R&VR: *Research Methods in Practice: Strategies for Description and Causation*