

SYA7933 Advanced Quantitative Methods
CCJ7742 Research Methods in Crime, Law, and Justice II
Fall 2023

Location: Matherly Hall 0251

Time: W Period 2-4 (8:30 AM - 9:20 AM)

Course website:

Instructor: Won-tak Joo (3333 Turlington Hall / wjoo@ufl.edu)

Office hours: Fridays 10:40 AM - 12:40 PM

COURSE DESCRIPTION

This course is to introduce advanced statistical methods in sociology and criminology. Students learn how to 1) understand the motivations behind the methods, 2) estimate and interpret results, and 3) critically evaluate empirical articles that apply these methods.

PREREQUISITES

- Introductory (SYA 7933/CCJ 5934) and intermediate-level (SYA 6407/CCJ 6705) quantitative method courses
- Basic skills for the statistical analysis using STATA (or R)

REQUIRED TEXTS

- Maydeu-Olivares, A., & Millsap, R. E. (2009). *The SAGE Handbook of Quantitative Methods in Psychology*. Sage Publications Ltd.
- Piquero, A. R., & Weisburd, D. (2010). *Handbook of Quantitative Criminology*. Springer.
- Angrist, J. D., & Pischke, J. S. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

(All the textbooks & weekly readings are freely accessible online)

COMMUNICATION

All inquiries concerning the course should be sent to wjoo@ufl.edu. Emails must include SYA7933 or CCJ7742 in the subject line. Please allow at least 24 hours during regular business hours (M-F, 9 AM – 5 PM) to respond to your email inquiries.

GRADING POLICY

- **Weekly response to weekly readings (20%):** ≤1-page response to the readings (one per week, not per article) / 12pt, single space / summary (several important things you learned from the readings) + questions + research ideas (especially related to your final paper) / by **Monday midnight**
- **Empirical research presentation (20%):** pick one empirical research paper and present it as if you are an author of this paper / presentation should be focused on more methods than theory (it does not mean that you can skip the theory part; think about the connection between theory and method, and explain how the theory supports the author's analytic strategy) / sign up in [this spread sheet](#)
- **Research proposal (20%):** ≤2-page proposal including short theoretical background + data + analytic strategy + references / you should explain what methods you choose and why they are suitable for your research goal / by **October 6 midnight**
- **Final paper (40%):** format follows your target journal / the paper includes theoretical background + data + analytic strategy + preliminary results + discussion + references / again, the theory part can be short but should include the argument about your methodological decisions / by **December 13 midnight**

COURSE POLICIES

- Electronic devices are required.
- Any missed or late assignments will receive a score of 0 (zero) discussed in advance with the instructor.

EVALUATION POLICY

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>.

GRADING SCALE

A	≥94
A-	≥90 & <94
B+	≥86 & <90
B	≥83 & <86
B-	≥80 & <83
C+	≥76 & <80
C	≥73 & <76
C-	≥70 & <73
D+	≥66 & <70
D	≥63 & <66
D-	≥60 & <63
E	<60

SCHEDULE

Date	Readings	Content
W1 Aug/23		Introduction Regression basics
W2 Aug/30	Cohen, J. (1992). A power primer. <i>Psychological Bulletin</i> , 112(1), 155–159. Mansournia, M. A., Nazemipour, M., Naimi, A. I., Collins, G. S., & Campbell, M. J. (2021). Reflection on modern methods: demystifying robust standard errors for epidemiologists. <i>International Journal of Epidemiology</i> , 50(1), 346-351. The SAGE Handbook of Quantitative Methods in Psychology, C16.	Power Standard errors Bootstrapping
W3 Sep/6	Handbook of Quantitative Criminology, C31 Breen, R., Karlson, K. B., & Holm, A. (2018). Interpreting and understanding logits, probits, and other nonlinear probability models. <i>Annual Review of Sociology</i> , 44, 39-54. *Gibson, C. L., Fagan, A. A., & Antle, K. (2014). Avoiding violent victimization among youths in urban neighborhoods: The importance of street efficacy. <i>American Journal of Public Health</i> , 104(2), e154-e161.	Logistic regression
W4 Sep/13	Gardner, W., Mulvey, E. P., & Shaw, E. C. (1995). Regression analyses of counts and rates: Poisson, overdispersed Poisson, and negative binomial models. <i>Psychological Bulletin</i> , 118(3), 392. Handbook of Quantitative Criminology, C32 *Cornwell, B. (2009). Good health and the bridging of structural holes. <i>Social Networks</i> , 31(1), 92-103.	Count data
W5 Sep/20	Bell, A., & Jones, K. (2015). Explaining fixed effects: Random effects modeling of time-series cross-sectional and panel data. <i>Political Science Research and Methods</i> , 3(1), 133-153. Handbook of Quantitative Criminology, C30	Multilevel analysis
W6 Sep/27	The SAGE Handbook of Quantitative Methods in Psychology, C16. *Kim, C., & Sakamoto, A. (2008). The rise of intra-occupational wage inequality in the United States, 1983 to 2002. <i>American Sociological Review</i> , 73(1), 129-157.	Growth model
W7 Oct/4	Azur, M. J., Stuart, E. A., Frangakis, C., & Leaf, P. J. (2011). Multiple imputation by chained equations: what is it and how does it work? <i>International Journal of Methods in Psychiatric Research</i> , 20(1), 40-49. *Mouw, T., & Kalleberg, A. L. (2010). Occupations and the structure of wage inequality in the United States, 1980s to 2000s. <i>American Sociological Review</i> , 75(3), 402-431. Sakamoto, A., & Kim, C. (2014). Is Rising Inequality Being Driven by Occupation? Further Results and Reflections on Mouw and Kalleberg (2010).	Multiple imputation
W8 Oct/11	Winship, C., & Radbill, L. (1994). Sampling weights and regression analysis. <i>Sociological Methods & Research</i> , 23(2), 230-257. Little, R. J., Carpenter, J. R., & Lee, K. J. (2022). A comparison of three popular methods for handling missing data: complete-case analysis, inverse probability weighting, and multiple imputation. <i>Sociological Methods & Research</i> , 00491241221113873.	Weight <Midterm presentation>

W9 Oct/18	Austin, P. C. (2011). An introduction to propensity score methods for reducing the effects of confounding in observational studies. <i>Multivariate Behavioral Research</i> , 46(3), 399-424. *Massoglia, M. (2008). Incarceration, health, and racial disparities in health. <i>Law & Society Review</i> , 42(2), 275-306.	Matching
W10 Oct/25	Wodtke, G. T. (2020). Regression-based adjustment for time-varying confounders. <i>Sociological Methods & Research</i> , 49(4), 906-946. *Wodtke, G. T., Harding, D. J., & Elwert, F. (2011). Neighborhood effects in temporal perspective: The impact of long-term exposure to concentrated disadvantage on high school graduation. <i>American Sociological Review</i> , 76(5), 713-736.	Marginal structural model
W11 Nov/1	Mostly Harmless Econometrics, C4. *Sharkey, P., Torrats-Espinosa, G., & Takyar, D. (2017). Community and the crime decline: The causal effect of local nonprofits on violent crime. <i>American Sociological Review</i> , 82(6), 1214-1240.	Instrumental variable
W12 Nov/8	Mostly Harmless Econometrics, C5. *Wu, G., Wen, M., & Wilson, F. A. (2021). Impact of recreational marijuana legalization on crime: Evidence from Oregon. <i>Journal of Criminal Justice</i> , 72, 101742.	Differences in differences
W13 Nov/15	Mostly Harmless Econometrics, C6. *Desmond, M., Papachristos, A. V., & Kirk, D. S. (2016). Police violence and citizen crime reporting in the black community. <i>American Sociological Review</i> , 81(5), 857-876. *Zoorob, M. (2020). Do police brutality stories reduce 911 calls? Reassessing an important criminological finding. <i>American Sociological Review</i> , 85(1), 176-183. Desmond, M., Papachristos, A. V., & Kirk, D. S. (2020). Evidence of the effect of police violence on citizen crime reporting. <i>American Sociological Review</i> , 85(1), 184-190.	Regression discontinuity
W14 Nov/22		(Nov/22-25 Thanksgiving)
W15 Nov/29	Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. <i>Journal of Personality and Social Psychology</i> , 51(6), 1173. Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. <i>Behavior Research Methods</i> , 40(3), 879-891. VanderWeele, T. J. (2016). Mediation analysis: a practitioner's guide. <i>Annual Review of Public Health</i> , 37, 17-32. *Isom Scott, D. A., & Seal, Z. T. (2019). Disentangling the roles of negative emotions and racial identity in the theory of African American offending. <i>American Journal of Criminal Justice</i> , 44, 277-308.	Mediation analysis
W16 Dec/6		<Final presentation>