

Rutgers, The State University of New Jersey  
School of Social Work  
Advanced Statistical Methods I: Applied Regression Analysis  
19:910:638, Fall 2022

**Class**

Instructor: **Lenna Nepomnyaschy**, Associate Professor

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Time: Tuesdays, 1:00 – 3:40 pm

Space: 120 Albany St., Classroom A

**Required Lab**

Instructor: **Addam Reynolds**, PhD Candidate

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Bio: <https://socialwork.rutgers.edu/admissions/phd-admissions/student-profiles>

Time: Wednesdays, 2:00 – 3:30 pm

Space: 120 Albany St., Classroom A

**Course Overview**

This course, the first of the statistics sequence for social work doctoral students, will focus on applied regression analysis and related multivariate methods. Linear regression will be covered in depth, including regression assumptions, model specification, diagnostics, interaction (moderation), and mediation (pathway) effects. Students will learn to use the Stata statistical package for all analyses and class assignments. Each homework assignment will build on the previous, with the final product being the back end of a journal-quality empirical paper for publication.

**Required Software:**

This course requires that students learn and use the **Stata Statistical Software Package** for hands-on data analysis and statistics applications for class assignments.

- Stata is available for all employees (GRAs, staff, faculty) for free download from the OIRT software portal: <https://software.rutgers.edu/>
- Stata is available to all students in any Rutgers computer lab as well as the Doctoral Student Computer lab in the SSW Annex AND in the Virtual Computer Lab through Rutgers Libraries: <https://labgateway.rutgers.edu/>
- Students may also purchase their own version of Stata at discounted rates through the Rutgers Office of Instructional Technology (Stata SE: student annual rate: \$179) <http://www.stata.com/order/new/edu/gradplans/gp-direct.html>  
**BEFORE MAKING ANY SOFTWARE PURCHASE, CONTACT PROFESSOR**

**Required Texts (3)**

- **(LB)** Lewis-Beck, C. & Lewis-Beck, M. 2016. *Applied Regression: An Introduction (2<sup>nd</sup> edition)*. Newbury Park, CA: Sage Publications. **Pretty cheap to purchase (\$20), BUT also available for free online through Rutgers Libraries.** <https://dx-doi-org.proxy.libraries.rutgers.edu/10.4135/9781483396774>
- **(MJ)** Mehmetoglu, M. & Jakobsen, T.G. 2016. *Applied Statistics Using Stata: A Guide for the Social Sciences*. Sage Publishing. **Not available online, need to purchase (\$35).** *Student Resources (access with Rutgers Netid):* <https://study-sagepub-com.proxy.libraries.rutgers.edu/mehmetogluandjakobsen/student-resources>
- **(SW)** Stock, J. & Watson, M. 2020. *Introduction to Econometrics*, 4<sup>th</sup> ed. Pearson Education. **Full text free online w/clickable chapters. Do not purchase:** <https://www.sea-stat.com/wp-content/uploads/2020/08/James-H.-Stock-Mark-W.-Watson-Introduction-to-Econometrics-Global-Edition-Pearson-Education-Limited-2020.pdf>

### Supplementary Resources and Texts

#### **More In-Depth Applied Regression & Introductory Econometrics Texts**

Gelman, A., Hill, J. & Vehtari, A. 2021. *Regression and Other Stories*. Cambridge University Press. (This book is **good** – a little more than you are ready for at first, but could be a primary resource as you go forward. It is fully available for free online ’)

<https://users.aalto.fi/~ave/ROS.pdf>

Wooldridge, J. 2006. *Introductory Econometrics: A Modern Approach*, 3<sup>rd</sup> edition. Mason, OH: Thompson. (*The bible of econometrics*)

#### **Writing about Quantitative Analysis**

Miller, Jane E., 2013. *The Chicago Guide to Writing about Multivariate Analysis (2<sup>nd</sup> Edition)*. The Chicago Guides to Writing, Editing, and Publishing. University of Chicago Press.

Study guide: <http://www.press.uchicago.edu/books/miller/multivariate/index.html>

**THIS IS SUPER HELPFUL**

See Jane Miller’s website for pdfs, videos and other material:

<http://policy.rutgers.edu/faculty/miller/>

#### **Specialized Regression Topics**

Jaccard, J. & Turrisi, R. 2003. *Interaction Effects in Multiple Regression (2<sup>nd</sup> Edition)*. Thousand Oaks, CA: Sage Publications. ISBN: 0761927425. (*Highly useful*)

Available online through Rutgers Libraries:

<https://methods-sagepub-com.proxy.libraries.rutgers.edu/book/interaction-effects-in-multiple-regression?fromsearch=true>

Hardy, Melissa. 1993. *Regression with Dummy Variables*. Newbury Park, CA: Sage Publications. Available online through Rutgers Libraries:

<https://dx-doi-org.proxy.libraries.rutgers.edu/10.4135/9781412985628>

### **General Stata Books**

- Hamilton, L.C. 2006. *Statistics with Stata*, 6<sup>th</sup> edition. Cengage.
- Long, S.J. 2009. *The Workflow of Data Analysis Using Stata*. College Station, TX: Stata Press.
- Kohler, U. & Kreuter, F. 2009. *Data Analysis Using Stata* (2<sup>nd</sup> ed). College Station, TX: Stata Press.
- Mitchell, M. 2010. *Data Management Using Stata: A Practical Handbook*. College Station, TX

### **Course Requirements**

Students' work will be evaluated based on the following course requirements (detailed instructions to follow).

#### Homework Assignments (4 total) = 40%

There will be **FOUR (4)** homework assignments, which will be based on the skills and concepts introduced during class and lab and on the required readings. Assignments will include writing syntax to create Stata output from a dataset, creating tables and graphs from output, interpreting output, and writing up methods and results of analyses. Assignments will build on one another leading to the final assignment that will include most of the previous elements.

#### **Homework #1: Univariate descriptive analysis & writing up descriptive analysis**

*Estimating, interpreting, and writing up results from descriptive tables*

#### **Homework #2: Multiple Regression**

*Writing a methods section and estimating, interpreting, and writing up results from a series of multiple regression models with continuous dependent variables*

#### **Homework #3: Interpreting Interaction Effects Exercise**

*Interpreting interaction effects (moderation) models with continuous dependent variables*

#### **Homework #4: Estimating & Interpreting Interaction Effects in Your Models**

*Estimating, interpreting, and writing up results from interaction effects (moderation) models with continuous dependent variables*

#### Final Assignment = 40%

The final assignment will consist of a complete data analysis project which will build on all the prior homework assignments. Analyses will include descriptive results, estimation of multiple linear regression models and interaction effects models with a continuous outcome. The written assignment will take the form of the **Methods, Results, and** (brief) **Discussion** sections of a journal-style quantitative empirical paper. Students will describe their data, sample, measures, and analytic strategy, describe the sample characteristics, interpret results from their bivariate and multiple regression models, and provide a brief discussion of the answer to their question and of the limitations of their analyses related to violations of regression assumptions and other sources of bias.

#### Participation in Class Activities = 20%

This portion of the grade is made up of several components:

- In-class activities – small group work with peers to workshop student submitted preliminary tables, small group work on interpreting and discussing sample papers, small group work on interpreting results from sample models

- Presentation of Final Assignment - students will present a working draft of their final assignment to the class in a PowerPoint presentation in order to receive feedback and provide feedback for peers regarding analyses and next steps (10-minute presentations, similar to a conference presentation).

***It goes without saying that students are expected to attend every class, come to class on time, remain in class for the entire session, and to be prepared for class having read the required readings and submitted the required materials (if something is due). While there is not specific course credit associated with attendance, absences, being late to class, and lack of participation and preparation will substantially impact students' overall grades.***

*If, for some reason, class has to be held in a virtual (zoom) setting, students are similarly expected to join the session on time, stay for the entire session, participate in discussions and breakout exercises, and must have their cameras on. If there is some reason that a student cannot have their camera turned on, they must inform the professor prior to class.*

### **Grading**

Grade cut-offs are as follows (scores of 0.5 and above will be rounded up):

A	92-100
B+	87-91
B	82-86
C+	77-81
C	70-76
F	0-69

**Applied Regression, Fall 2022 Outline of Class & Lab Topics & Homework Due Dates**

<b>Week &amp; Date</b>	<b>Class &amp; Lab Topics &amp; Activities</b>	<b>Assignment DUE Dates &amp; Topics</b>
Week 1: 9/6/22	Class: Intro to Class & to the Fragile Families Study <i>Class Activity: Discussion of choosing a question to answer this semester &amp; the FF Data</i> Lab: Intro to Stata & to FF data	
Week 2: 9/13/22	Class: Intro to Quantitative Analysis & Current Issues in Quantitative Methods <i>Class Activity: Discussion of issues in quantitative analyses &amp; students' research questions</i> Lab: Intro to Stata & Variable Construction	
Week 3: 9/20/22	Class: Quantitative Analyses & Descriptive Statistics <i>Class Activity: Discussion of sample papers</i> Lab: Cont'd variable construction & descriptive statistics	
Week 4: 9/27/22	Class: Bivariate Analysis & Intro to Linear Regression <i>Class Activity: Discussion of sample papers, methods section of empirical paper &amp; Homework #1</i> Lab: Cont'd variable construction & bivariate analysis	
Week 5: 10/4/22	Class: Bivariate Linear Regression <i>Class Activity: Calculating bivariate regression coefficients</i> Lab: Cont'd variable construction & bivariate regression	
Week 6: 10/11/22	Class: Bivariate Regression Cont'd <i>Class Activity: Group workshopping of descriptive tables</i> Lab: Cont'd variable construction & bivariate regression	<i>Submit descriptive tables - day prior</i>
Week 7: 10/18/22	Class: Dummy Variables & Multiple Regression <i>Class Activity: Interpreting regression coefficients</i> Lab: Multiple Regression	<i>HW #1: Revised Descriptive Tables due</i>
Week 8: 10/25/22	Class: Multiple Regression Cont'd <i>Class Activity: Discussion of regression models in sample papers</i> Lab: Multiple regression & tabling regression output	
Week 9: 11/1/22	Class: Multiple regression Cont'd <i>Class Activity: Group workshopping of multiple regression tables</i> Lab: Multiple regression & creating figures	<i>Submit multiple regression tables - prior day</i>
Week 10: 11/8/22	Class: Interaction Effects <i>Class Activity: Interaction effects practice</i> Lab: Interaction Effects	<i>HW#2: Revised Multiple Regression Models Due</i>
Week 11: 11/15/22	Class: Interaction Effects Cont'd <i>Class Activity: Interaction effects practice</i> Lab: Interaction Effects	
Week 12: 11/22/22	Class: Wrap Up Interaction Effects <i>Class Activity: Group workshopping of interaction effects tables</i> Lab: Interaction Effects	<i>Submit interaction tables/exercises - prior day</i>
Week 13: 11/29/22	Class: Catch up and review <i>Class Activity: Discuss Sample Papers</i> Lab: Final Assignment	<i>HW #3: Interaction Effects Models Due</i>
Week 14: 12/6/22	Class: <b>Student Presentations</b> Lab: Final Assignment	<i>Students present &amp; respond to peers</i>
Week 15: 12/13/22	Class: Wrap Up & Discussion of Results of Analyses Lab: Final Assignment	<i>Final Assignment Due (Friday)</i>

### **Detailed Course Outline**

**Please note:** In addition to the required readings for each week, there are sample empirical articles listed (some TBA). I will be adding (or substituting) relevant peer-reviewed empirical papers that use the various methods that we are covering as we go. Thus, each week there may be alternate journal articles that students will be required to read.

#### **Week 1: September 6, 2022**

##### **Topics: Intro to Course & Intro to Fragile Families Study**

- Overview of course
- Discuss the FF Study & potential areas of interest

##### **Required Reading:**

- Review syllabus
- Start to explore the Fragile Families & Child Wellbeing Study website (*About, Data & Documentation*): <https://fragilefamilies.princeton.edu/>
- Fragile Families Study Fact Sheet: Key Findings from Baseline to the 5-year Follow-Up [https://fragilefamilies.princeton.edu/sites/g/files/toruqf2001/files/ff\\_fact\\_sheet.pdf](https://fragilefamilies.princeton.edu/sites/g/files/toruqf2001/files/ff_fact_sheet.pdf)
- **(skim this)** Reichman, N., Teitler, J., Garfinkel, I. & McLanahan, S. 2001. Fragile Families: Sample and Design. *Children and Youth Services Review* 23 (4/5): 303–26. [https://doi.org/10.1016/S0190-7409\(01\)00141-4](https://doi.org/10.1016/S0190-7409(01)00141-4).

##### **In-Class Activity:**

Discussion of choosing a dataset for course assignments & the Fragile Families Data

#### **Week 2: September 13, 2022**

##### **Topics: Intro to quantitative analysis & current issues in quantitative analysis**

- Legacy of racial and social injustice in quantitative analysis
- Replication crisis in science

##### **Required Readings:**

- Boyd, R., Lindo, E., Weeks, L. & McLemore, M. 2020. On Racism: A new Standard for Publishing on Racial Health Inequities. *Health Affairs Blog*. <https://www.healthaffairs.org/doi/10.1377/hblog20200630.939347/full/>
- Zuberi, T. & Bonilla-Silva, E. 2008. *White Logic, White Methods: Racism & Methodology*. Rowman & Littlefield. **Introduction (p. 1-16)**. Full book available free online through RU Library. <https://ebookcentral-proquest-com.proxy.libraries.rutgers.edu/lib/rutgers-ebooks/detail.action?pq-origsite=primo&docID=1343788>
- Piper, Kelsey. 10/14/2020. Science has been in a replication crisis for a decade. Have we learned anything? Vox.com. (**Excellent links to all the key papers in this area**) <https://www.vox.com/future-perfect/21504366/science-replication-crisis-peer-review-statistics>
- Continue to explore FF data & website (*Scales & Concepts Documentation, Publications*)

##### **In-Class Activity:**

Discussion of issues in quantitative analysis & discussion of students' research questions

**Suggested Reading**

See section in our canvas course shell on anti-racist research & statistics resources:

[https://rutgers.instructure.com/courses/196721/pages/anti-racist-research-resources?module\\_item\\_id=6751284](https://rutgers.instructure.com/courses/196721/pages/anti-racist-research-resources?module_item_id=6751284)

**Week 3: September 20, 2022****Topics: Introduction to quantitative analysis & descriptive statistics**

- Types of Data, Types of Variables
- Concepts, Examples, Terminology
- Introduction to Regression

**Required Readings:**

- MJ: Chapter 1: Research and Statistics, (p. 1-15)
- [SW](#): Chapter 1: Economic Questions & Data (p. 43-55)
- Gordon, Chapter 5: Basic Descriptive Statistics, Types of Variables (p. 97 – 123)
- Continue to explore the Fragile Families data & website

**Sample Papers – Read Abstracts Only**

- Turney, K. (2021). Depressive Symptoms among Adolescents Exposed to Personal and Vicarious Police Contact. *Society and Mental Health*, 11(2), 113–133. <https://doi.org/10.1177/2156869320923095>
- Haralampoudis, A., Nepomnyaschy, L., & Donnelly, L. (2021). Head Start and Nonresident Fathers' Contributions to Children. *Journal of Marriage and Family*, 83(3), 699–716. <https://doi.org/10.1111/jomf.12756>
- Gold, S., & Nepomnyaschy, L. (2018). Neighborhood Physical Disorder and Early Delinquency Among Urban Children. *Journal of Marriage and Family*, 80(4), 919–933. <https://doi.org/10.1111/jomf.12487>
- James, C., Jimenez, M. E., Wade Jr, R., & Nepomnyaschy, L. (2021). Adverse Childhood Experiences and Teen Behavior Outcomes: The Role of Disability. *Academic Pediatrics*, 21(8), 1395–1403. <https://doi.org/10.1016/j.acap.2021.05.006>
- Nepomnyaschy, L., Emory, A. D., Eickmeyer, K. J., Waller, M. R., & Miller, D. P. (2021). Parental Debt and Child Well-Being: What Type of Debt Matters for Child Outcomes? *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 7(3), 122–151. <https://doi.org/10.7758/RSF.2021.7.3.06>

**In-Class Activity:****Discussion of sample papers**

- Identify the questions papers are asking
- Identify dependent & independent variables
- Draw out conceptual diagrams

**Suggested Readings:**

- *Reviews of Probability and Inferential Statistics (this should all be a review from your summer stats course)*

- SUPER helpful and simple review of probability, inferential statistics, hypothesis testing: <https://pressbooks.bccampus.ca/statspsych/chapter/chapter-4/>
- [Stock & Watson \(SW\)](#), Chapter 2: Review of Probability & Chapter 3: Review of Statistics.

#### **Week 4: September 27, 2022**

##### **Topics: Bivariate Analysis & Intro to Linear Regression**

##### **Required Readings:**

- MJ: Chapter 2: 2<sup>nd</sup> half of chapter, Descriptive Statistics & Bivariate Inferential Statistics, p. 31-43.
- Continue to explore FF data & website
- How to read an empirical paper
- White, L. 2005. Writes of Passage: Writing an Empirical Journal Article. *Journal of Marriage and Family* 69: 791-798. (*Start from methods section, p. 793*)
- Review Homework #1 assignment

##### **Sample papers: Read Measures Section & Descriptive Tables only**

- Turney, K. (2021). Depressive Symptoms among Adolescents Exposed to Personal and Vicarious Police Contact. *Society and Mental Health*, 11(2), 113–133. <https://doi.org/10.1177/2156869320923095>
- Haralampoudis, A., Nepomnyaschy, L., & Donnelly, L. (2021). Head Start and Nonresident Fathers' Involvement with Children. *Journal of Marriage and Family*, 83(3), 699–716. <https://doi.org/10.1111/jomf.12756>
- Gold, S., & Nepomnyaschy, L. (2018). Neighborhood Physical Disorder and Early Delinquency Among Urban Children. *Journal of Marriage and Family*, 80(4), 919–933. <https://doi.org/10.1111/jomf.12487>
- James, C., Jimenez, M. E., Wade Jr, R., & Nepomnyaschy, L. (2021). Adverse Childhood Experiences and Teen Behavior Outcomes: The Role of Disability. *Academic Pediatrics*, 21(8), 1395–1403. <https://doi.org/10.1016/j.acap.2021.05.006>
- Nepomnyaschy, L., Emory, A. D., Eickmeyer, K. J., Waller, M. R., & Miller, D. P. (2021). Parental Debt and Child Well-Being: What Type of Debt Matters for Child Outcomes? *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 7(3), 122–151. <https://doi.org/10.7758/RSF.2021.7.3.06>

##### **In-Class Activity**

- Discuss descriptive results from sample papers
- Discuss structure of the methods section of an empirical paper
- Review Homework #1 Assignment

#### **Week 5: October 4, 2022**

##### **Topic: Bivariate Linear Regression**

- Introduction and overview of regression analysis
- Calculating bivariate regression coefficients

##### **Required Readings:**



- LB: Chapter 1: Bivariate Regression: Fitting a Straight Line (*p. 1 – 22*)
- MJ: Chapter 3: Simple Bivariate Regression (*p. 45 – 54 only*)
- [SW](#): Chapter 4: Linear Regression w/One Regressor (*p. 143-155 only*)

### **In-Class Activity:**

- Calculating bivariate regression coefficients & creating formulas in excel

### **Week 6: October 11, 2022**

#### **Topics: Bivariate regression continued**

- Interpreting bivariate regression coefficients
- Hypothesis Testing
- Predictions w/bivariate regression

***DUE: Submit preliminary descriptive tables for group workshoping exercise, day prior***

### **Required Readings:**

- [SW](#): Chapter 5: Hypothesis Tests & Confidence Intervals (p. 178-188 ONLY)
- McShane, B., Gal, D., Gelman, A., Robert, C. & Tackett, J. 2019. Abandon Statistical Significance. *The American Statistician* 70:S1 (p. 235-241 **ONLY**)  
<https://www.tandfonline.com/doi/full/10.1080/00031305.2018.1527253>
- **(SKIM THIS)** Resnick, Brian. 2017. What a nerdy debate about p-values shows about science – and how to fix it. The Case for, and against, redefining “statistical significance.” Vox. <https://www.vox.com/science-and-health/2017/7/31/16021654/p-values-statistical-significance-redefine-0005>

### **Sample papers: Read Methods section: Data, Sample, Measures, Analytic Strategy**

- Turney, K. (2021). Depressive Symptoms among Adolescents Exposed to Personal and Vicarious Police Contact. *Society and Mental Health*, 11(2), 113–133.  
<https://doi.org/10.1177/2156869320923095>
- Haralampoudis, A., Nepomnyaschy, L., & Donnelly, L. (2021). Head Start and Nonresident Fathers’ Involvement with Children. *Journal of Marriage and Family*, 83(3), 699–716. <https://doi.org/10.1111/jomf.12756>
- James, C., Jimenez, M. E., Wade Jr, R., & Nepomnyaschy, L. (2021). Adverse Childhood Experiences and Teen Behavior Outcomes: The Role of Disability. *Academic Pediatrics*, 21(8), 1395–1403. <https://doi.org/10.1016/j.acap.2021.05.006>

### **In-Class Activity:**

- Workshoping of descriptive tables
- Discussion of writing up Methods section & review of Methods sections in sample papers

### **Suggested Readings:**

- LB: Chapter 2: Bivariate Regression: Assumptions and Inferences: (*2<sup>nd</sup> part: p. 29 – 53 ONLY*).

- MJ: Chapter 3: Simple Bivariate Regression (*p. 54 – 65 ONLY*)

**Week 7: October 18, 2022**

**Topic: Regression w/Dummy Variables & Multiple Regression**

- Binary & categorical independent variables (dummy variables)
- Introduction to multiple regression

***DUE: Homework #1: Descriptive Statistics & Variable Description***

**Required Readings:**

- MJ: Chapter 5: Regression with Dummy Variables
- MJ: Chapter 4: Multiple Regression
- LB: Chapter 3: Multiple Regression (*p. 55 – 74*).

***Sample papers: TBA***

**Suggested Readings:**

- Hardy, M. 1993. *Regression with Dummy Variables*, Chapters 1, 2, and 3 (p. 1 – 28)

**In-Class Activity**

- Interpreting regression coefficients

**Week 8: October 25, 2022**

**Topic: Multiple Regression Continued**

- Model specification
- Predictions in multiple regression
- Magnitude of effects
- Rescaling and transforming variables for interpretation
- Mediation & Confounding

**Required Readings**

- (LB) Lewis-Beck. Chapter 4: Multiple Regression: Special Topics (p. 75-95)
- Gordon, Chapter 13: Indirect Effects and Omitted Variable Bias (p. 461 – 480)
- Miller, Chapter 9: Quantitative Comparisons for Multivariate Models (*p. 193 – 199 ONLY*)
- Miller, Chapter 10: The Goldilocks Problem in Multivariate Regression (*p. 211 – 229*)
- Moksony, Ferenc. 1999. Small is Beautiful. The Use and Interpretation of R-Squared in Social Science Research. *Review of Sociology*.
- Why we don't really care about the Rsquared in Social Science Research? July 3, 2018. The Medium.  
<https://medium.com/@vince.shields913/why-we-dont-really-care-about-the-r-squared-in-econometrics-social-science-593e2db0391f>

**Sample Papers: Look at regression model tables & Read Results Section**

- Turney, K. (2021). Depressive Symptoms among Adolescents Exposed to Personal and Vicarious Police Contact. *Society and Mental Health*, 11(2), 113–133. <https://doi.org/10.1177/2156869320923095>
- Haralampoudis, A., Nepomnyaschy, L., & Donnelly, L. (2021). Head Start and Nonresident Fathers' Involvement with Children. *Journal of Marriage and Family*, 83(3), 699–716. <https://doi.org/10.1111/jomf.12756>
- James, C., Jimenez, M. E., Wade Jr, R., & Nepomnyaschy, L. (2021). Adverse Childhood Experiences and Teen Behavior Outcomes: The Role of Disability. *Academic Pediatrics*, 21(8), 1395–1403. <https://doi.org/10.1016/j.acap.2021.05.006>

**In-class Activity:**

Review & discuss regression models in sample papers

**Week 9: November 1, 2022****Topic: Multiple Regression continued**

- Regression Assumptions
- Nonlinear Relationships
- Regression Diagnostics

**Required Readings:**

- MJ, Chapter 7: Linear Regression Assumptions & Diagnostics
- LB, Chapter 2: Bivariate Regression: Assumptions and Inferences, (*1<sup>st</sup> PART ONLY, p. 23 – 29*).
- [Gelman et al.](#) Chapter 11: Assumptions, Diagnostics & Model evaluation: (2 pages only: p. 153-155).
- [SW](#): Chapter 8: Nonlinear Regression Functions (*1<sup>st</sup> part only: p. 277-296*)

***DUE: Submit preliminary multiple regression tables for group workshopping exercise, day prior***

**In-Class Activity:**

- Interpreting multiple regression coefficients & workshopping multiple regression tables

**Suggested Readings**

- Gordon, Chapter 12: Nonlinear Relationships (p. 434 – 456)
- Gordon, Chapter 14: Outliers, Heteroskedasticity, and Multicollinearity (p. 481-520).
- Studenmund, Chapter 11: Running Your Own Regression Project, Practical Advice for Your Project (p. 383 – 393).  
AND A Regression User's Checklist and Guide, (p. 395 – 400).

**Week 10: November 8, 2022****Topic: Introduction to Interaction Effects (moderation)**

***DUE: Homework #2: Multiple Regression Models, Methods Section & Results***

**Required Readings**

- MJ: Chapter 6: Interaction/Moderation Effects Using Regression
- [SW](#): Chapter 8: Interactions Between Independent Variables (**2<sup>nd</sup> Part only**: p. 297-316)

**In-Class Activity:**

Interaction effects interpretation

**Supplementary Reading:**

- Jaccard & Turrisi, *Interaction Effects in Multiple Regression*: Chapters 1 and 2, (p. 1 - 43). *very helpful – strongly recommended*
- Gordon, Chapter 11: Interaction Effects.

***Week 11: November 15, 2022***

**Topic: Interaction Effects cont'd**

**Required Readings:**

- Miller, Chapter 16: Writing About Interactions (p. 339 – 365).
- [SW](#): Chapter 9: Assessing Studies Based on Multiple Regression (p. 330-354)
- J.E. Miller and Y.V. Rodgers, 2008. “Economic Importance and Statistical Significance: Guidelines for Communicating Empirical Research.” *Feminist Economics*. 14(2):117-149.

**Sample papers: TBA**

**In-Class Activity:**

- Interaction Effects Practice – sample papers

***Week 12: November 22, 2022***

**Topic: Interaction effects wrap up**

***DUE: Interaction Effects Preliminary Tables for Group Workshopping Exercise, Day Prior***

**In-Class Activity:**

- Workshopping interaction effects tables

***Week 13: November 29, 2022***

**Topic: Catch up & Review Sample Papers**

***DUE: Homework #3: Interaction Effects Models***

**Sample papers: TBA**

**In-Class Activity**

- Review results of sample papers

***Week 14: December 6, 2022***

**STUDENT PRESENTATIONS OF FINAL ASSIGNMENT**

***Week 15: December 13, 2022***

**Topic: Wrap up & Discussion of Final Assignments & Next Steps**

**FINAL ASSIGNMENT DUE, Friday**