

COMM 554: Regression and Multivariate Communication Research 4 Units

Spring 2020 – Monday 2-4:50pm

Section: 20832D

Location: ASC230

Instructor: Professor Lynn Carol Miller

Office: ASC101B

Office Hours: Monday 5 PM or by appointment

Contact Info: lmiller@usc.edu, 310-874-3402

I. Course Description

This course is designed to follow a basic “introductory methods/statistics” course. Our chief goal is to refine your ability to analyze and interpret data in communication and social science. My personal philosophy based on interactions with students over 38 years of teaching is that students learn how to do research by carefully going through the process of “doing it”! The questions we will pose and the steps that we will take will be the steps one would take in dealing with real data sets once they are collected (e.g., now that I have these data, exactly what do I do?). *To help you get the most out of this course, you will work with real data, real codebooks, real questionnaires and other relevant documents. You will get much more out of this course if you have your own data sets that you want to analyze.* If you do not have such data sets, then you can develop – with my help—a set of research questions by looking at an existing data set (I have some you can work with for the purpose of this course). You can also find a variety of free data sets online

(<http://www.icpsr.umich.edu/icpsrweb/ICPSR/index.jsp;jsessionid=AFE23D94A0F9FF6E76BF05B4663C6A1F>). Thus, our conceptual/methodological/statistical questions will be grounded, as much as possible, in the realities of our own data sets.

Many of my starting examples in this course will be based on examining designs and analyses especially relevant to health communication, including some of my large experimental longitudinal intervention data sets. These are rich data sets that afford numerous opportunities to appropriately use the entire suite of statistical analyses we will be discussing this semester. If you have additional data sets these will also become the topic of exploration. A library of articles from health communication and other fields will be available to provide examples of how to write up one’s work. We will add to this library this semester.

Although there will be “lecture modules,” much of our time will be spent having small group interactions, focused on individual projects and questions.

II. Student Learning Outcomes

The major learning outcomes include demonstrating how to use more sophisticated research methods and advanced statistical tools like MANOVA, FACTOR ANALYSIS, and MULTIPLE REGRESSION. This includes when and why to use these tools, how to prepare data for these

analyses (all the preliminary work needed to understand your data sets and transform your variables, if necessary), how to run the appropriate form of the analysis (given your question), how to interpret output, how to “trouble shoot,” determine and conduct the appropriate follow-up tests, what you will need from the output in writing up results for publication outlets, and how to write about these findings and make up appropriate tables, graphs, figures. What does your output tell you about what alternative explanations there are and what you could do better the next time in designing your study and its materials (e.g., stimuli, questionnaires).

All of this takes us to the final output of this class in which you demonstrate your new found skill sets, including in your oral and written report of your project using APA style (please be sure you have the up to date manual for this). That is the “big” learning outcome of this course is your better ability to effectively analyze a data set and write up a set of findings as a first draft for a possible publication.

Prerequisite(s): None

Co-Requisite(s): None

Concurrent Enrollment: None

Recommended Preparation: A basic method/statistics class like Comm 550.

III. Course Notes

The course is Web-Enhanced (i.e. Blackboard). Copies of lecture slides and other class information will be posted on Blackboard. **Blackboard learning modules.** *Each week there is a module that will include readings, videos, powerpoint slides, assignments, primary research exemplars facilitating learning objectives – and serving as a foundation -- for that week’s discussion and exercises.*

Multimedia or technology-enhanced learning strategies will be used, including the use of *USC’s version of Academic Writer (APA’s tool)...free.* This is a very good tool for maintaining references and learning to write in APA style and you will be using it with your group in this course. <https://academicwriter-apa-org.libproxy2.usc.edu/6/>

IV. Description and Assessment of Assignments

• **Homework Assignments: There are Homework Assignments most weeks.** Homeworks that are not powerpoint slides (for in class presentations during the semester) can be redone to optimize your learning: You can receive full credit within 1 week after they are returned with feedback to you (homeworks receive a 0 or 1 and really are designed to let you know whether you are on top of the material (1) or not (0), to provide feedback, and to encourage you to “keep up”. Some assignments as noted will include drafts of paper sections **for the final paper** and/or **powerpoint slides on which as indicated you will be asked to highlight findings from analyses we are discussing.** **All Assignments are due by Class time.** Later assignments will incorporate earlier material. All assignments must be turned in to receive a passing grade in the course. You may redo labs (A assignments) to master material and earn up to full credit (turned in one week after feedback).

Paper Presentations: You will present your research as a talk at the end of the course on the final day of class. This is a 15-minute presentation (intro, method, results focus (8-9 minutes), discussion) with 10 minutes of questions.

Class Participation. All students are expected to be present (please let me know if you will be ill or unable to attend) and to actively participate in class discussion. You will also be expected to provide feedback to other students during their presentations. Feedback on final presentations to other students will be part of your class participation grade as well.

Final Paper. *This is the major proof of skill for the course and is a final paper (all APA components – title, abstract, intro, method, results, discussion, references, tables, figures – please also put this in the APA Academic Writer. Write-ups similar in scope and format to an article in HC or CM (communication) or PSPB (psychology).*

V. Grading

a. Breakdown of Grade

Assignment	Points	% of Grade
Homework Assignments	30	30%
Final Paper Presentation	15	15%
Final Papers	40	40%
Participation	15	15%
TOTAL	100	100%

b. Grading Scale

The following is our grading scale.

93% to 100%: A	80% to 83%: B-	67% to 69%: D+
90% to 93%: A-	77% to 79%: C+	64% to 66%: D
87% to 89%: B+	73% to 76%: C	60% to 63%: D-
84% to 86%: B	70% to 72%: C-	0% to 59%: F

c. Grading Standards

Assignments are graded based on percent correct. A point scale rubric (using APA required criteria) is provided on blackboard for what is required to earn partial and full point credit per section of the paper (e.g., title page, abstract, methods, results, discussion, references, tables, figures, etc.). Presentations on power point also have a point rubric that students may follow. Participation points is based on attendance and times/quality of participation in class (that the TA

will record) and student input (time, quality) regarding projects (peer/faculty/TA evaluation form).

d. Grading Timeline

Assignments, including portions of projects/papers, are returned a week after submission (except IRB submission materials).

VI. Assignment Rubrics

These are available for APA papers on blackboard.

VII. Assignment Submission Policy

- A. All Assignments are due on the dates specified
- B. All assignments must be submitted to Lynn Miller via email (use standard naming- Student last name, first name, assignment number, if revision give number) Example: SmithMaryAssign1

VIII. Required Readings and Supplementary Materials

Required Texts

Tabachnick, B. G., and Fidell, L. S. (2019). [Using Multivariate Statistics](https://www.amazon.com/Using-Multivariate-Statistics-Barbara-Tabachnick-ebook/dp/B07R8F7T65/ref=cm_cr_ar_p_d_pb_opt?ie=UTF8), 7th ed. Boston : Pearson Education Inc. Please order ASAP; beginning chapters will be on Blackboard for your convenience. https://www.amazon.com/Using-Multivariate-Statistics-Barbara-Tabachnick-ebook/dp/B07R8F7T65/ref=cm_cr_ar_p_d_pb_opt?ie=UTF8
I'd recommend the content of this book and the ebook version (if you buy it it's under \$100 and it's a great reference book and includes chapters that you might use for other courses or analyses we don't cover). There is a rental option. The loose paper version does not get good reviews so may not want to get that.

Hayes, A. F. (2017). Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach, 2nd edition. Hard copy for about \$55.00, \$20 to rent. ISBN 9781462534654. There is an ebook version of this . https://www.amazon.com/s?k=hayes+introduction+to+mediation+moderation&hvadid=77996717516622&hvbmt=be&hvdev=c&hvqmt=e&tag=mh0b-20&ref=pd_sl_7xpzn8hoza_e

Website for info on the software and other goodies associated with this module for SPSS. <http://afh Hayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html>
There is also an SPSS syntax guide on the same page that may be useful to you. We'll cover downloading this when we get to that section of the course.

Publication Manual of the American Psychological Association (7th ed.). (2019). Washington, D.C.: American Psychological Association. (ISBN-13: 978-1433832178, spiral-bound is a tad easier to use \$44.99 – you will use this for many years; paperback is \$30.00). A variety of vendors for this including the bookstore. https://www.amazon.com/Publication-Manual-American-Psychological-Association-dp-1433832178/dp/1433832178/ref=mt_spiral_bound?_encoding=UTF8&me=&qid=

Required Software

SPSS access – should be able to get through school...hold off purchasing. There is an SPSS module for the mediation/moderation that loads into your SPSS to make this super easy (see link above under Hayes).

Other Electronic Resources

Powerpoint slides, spreadsheets, quick time movies and modules, visuals, articles, and resource links, etc. on Blackboard for the course. These are to be viewed, read, and/or studied prior to that week's class and will prepare you for that week's lab in class.

If you are a member of ICA and/or NCA (which we encourage all of you to be who are in communication or want to apply to communication positions in the future) you will have easy access to the academic journals of those associations at those websites.

<http://www.icahdq.org> (Journal of Communication; Human Communication Research; Communication Theory; Journal of Computer-Mediated Communication; Communication, Culture, & Critique).

<http://www.natcom.org> (Journal of International and Intercultural Communication; Journal of Applied Communication Research; Quarterly Journal of Speech; Review of Communication; Text and Performance Quarterly; Communication and Critical/Cultural Studies; Communication Education; Communication Monographs; Communication Teacher; Critical Studies in Media Communication; First Amendment Studies)

This is a really great stat website: <http://www.ats.ucla.edu/stat/spss/>

Other websites for well-regarded communication journals to see the latest:

<http://crx.sagepub.com.libproxy.usc.edu> (sage journals like Communication Research) or <http://intl-crx.sagepub.com.libproxy.usc.edu>

<http://explore.tandfonline.com/content/ah/comm-highly-cited> (highly cited communication articles by Taylor & Francis Online publishers)

Data

1. https://trends.google.com/trends/explore?geo=US&q=%2Fm%2F0cqt90,%2Fm%2F012v1t,%2Fm%2F01qh39,%2Fm%2F01_gbv

Additional Readings (will be either available on blackboard or via a link)

IX. Laptop Policy

All graduate Annenberg students are required to have a PC or Apple laptop that can be used in Annenberg classes. Please refer to the **Annenberg Digital Lounge** for more information. To connect to USC's Secure Wireless network, please visit USC's **Information Technology Services** website.

X. Add/Drop Dates for Session 001 (15 weeks: 1/13/20 – 5/1/20)

Friday, January 31: Last day to register and add classes for Session 001

Friday, January 31: Last day to drop a class without a mark of “W,” except for Monday-only classes, and receive a refund for Session 001

Tuesday, February 4: Last day to drop a Monday-only class without a mark of “W” and receive a refund for Session 001

Friday, February 28: Last day to drop a course without a mark of “W” on the transcript for Session 001. [Please drop any course by the end of week three (or the 20 percent mark of the session) to avoid tuition charges.]

Friday, February 28: Last day to change pass/no pass to letter grade for Session 001. [All major and minor courses must be taken for a letter grade.]

Friday, April 3: Last day to drop a class with a mark of “W” for Session 001

XI. Course Schedule: A Weekly Breakdown

Important note to students: Be advised that this syllabus is subject to change - and probably will change - based on the progress of the class, news events, and/or guest speaker availability.

	Topics/Daily Activities	Readings and Homework	Deliverable/Due Dates
Week 1 Dates: 1/13/2020	Introduction and overview; Discussion of project possibilities; available data sets to analyze	T&F, Chapters 1-2	Arrange meeting with Dr. Miller for this week if you do not have a viable data set to use; Set up meeting with Dr. Miller over next 2 weeks to go over homework #1 (see sign up sheet; Your homework should be fairly complete prior to meeting)
Dates: 1/20/2020	No Class MLK day		
Week 2 Dates: 1/27/2020	Review and extension: Univariate and Bivariate Statistics	Readings and modules on Blackboard, T&F Chapter 3.	Homework #1: Overview of hypotheses and preliminary outline of data analysis plan, include variables, items used to gather variables (measurement scales, surveys, etc.), nature of those variables, descriptive statistics pertaining to those variables.
Week 3 Dates: 2/03/2020	Cleaning up your act	Readings and module on Blackboard; T&F Chapter 4	Homework #2 due: t-tests, ANOVA, correlations; Have meeting with Dr. Miller before today’s class regarding data analysis plan.

Week 4 Dates: 2/10/2020	Cleaning up your act continued; Factor Analysis	Readings and module on Blackboard; T&F Chapter 4, Factor analysis and Reliability T&F Chapter 13	Homework #3 Hypotheses; key variables; draft of methods section.
Dates: 2/17/2020	President's Day		
Week 5 Dates: 2/24/2020	Multiple Regression	T&F Chapter 5	Homework #4 Due: Data Screening Revision of hypotheses, data analysis Plan; Factor Analysis.
Week 6 Dates: 3/2/2020	Multiple Regression	Readings and module on Blackboard; Hayes Part I and Part II mediation	Homework #5 Multiple Regression I Due; Outline of Introduction
Week 7 Dates: 3/9/2020	Multiple Regression continued	Readings and module on Blackboard; Hayes Part III (moderation)	Revision of hypotheses due; Homework #6 Multiple Regression II, Outline of Introduction
Dates: 3/16/2020	Spring Break		
Week 8 Dates: 3/23/2020	Multiple Regression continued	Readings and module on Blackboard; Hayes Part IV (conditional Process)	Homework #7 Due, Multiple Regression II
Week 9 Dates: 3/30/2020	Discussing nitty-gritty of Experimental Designs	Readings and module on Blackboard; T&F chapters 1-3, 6	Homework #8 Due, Multiple Regression III
Week 10 Dates: 4/06/2020	MANOVA/ MANCOVA (Between designs, Multiple DVs)	Readings and module on Blackboard; T&F chapter 7	Homework #9 First Draft of Introduction (with hypotheses/questions); Revised methods; Outline of Results (what sections will be included?; what analyses performed? Fill in as much as you can based on your analyses to date (e.g., factor analysis,

			regression, ANOVA, ANCOVA).
Week 11 Dates: 4/13/2020	MANOVA/ MANCOVA continued including Multivariate approach to Repeated Measures	Readings and module on Blackboard; T&F chapter 7, 8	Updated data analysis plan and first draft due; Homework #10 Due, ANOVA/ANCOVA
Week 12 Dates: 4/20/2020	Within and Between- Within Designs, Doubly Multivariate Designs	Readings and Modules on blackboard, T&F chapter 8,9	Discussion Draft Due Homework #11 Due, MANOVA/MANCOVA; Profile and Doubly MV Designs/Follow-ups
Week 15 Dates: 4/27/2020	Student Presentations	Modules on blackboard	Presentations Due
STUDY DAYS Dates: 5/2-5/5			
Project Due Dates:	Project due		Final Paper Due NO FINAL EXAM

XII. Policies and Procedures

Additional Policies

Students are expected to be prepared for, attend, and participate in all classes. If you are unable to attend (e.g., due to illness; other critical conflict) please let me know as soon as possible. You may use your computers in class but these are to be used for class purposes during that time (e.g., for SPSS, as appropriate in looking up articles, etc.).

Communication

Please contact me outside of class by email when you cannot come to office hours to arrange a meeting time (e.g., in my office, by skype, via phone, etc.). I usually respond within 48 hours.

Statement on Academic Conduct and Support Systems

a. Academic Conduct

Plagiarism

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

b. Support Systems

Counseling and Mental Health - (213) 740-9355 – 24/7 on call

studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298

equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity | Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

uscsa.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Annenberg Student Success Fund

<https://annenberg.usc.edu/current-students/resources/additional-funding-resources>

The Annenberg Student Success Fund is a donor-funded financial aid account available to USC Annenberg undergraduate and graduate students for non-tuition expenses related to extra- and co-curricular programs and opportunities.

Breaking Bread Program [undergraduate students only]

<https://undergrad.usc.edu/faculty/bread/>

The Breaking Bread Program is designed to provide individual undergraduate students with an opportunity to meet and have scholarly discussions with faculty members outside of the normal classroom setting. Through this program, students and faculty enjoy good company and great conversation by literally “breaking bread” over a meal together and USC will pick up the tab! Your meal event can take place anywhere outside of the normal classroom setting. Your venue can be a restaurant or eatery on or off-campus.

XIII. About Your Instructor

Lynn Carol Miller (Ph.D., University of Texas at Austin) is a Professor of Communication and Psychology at the University of Southern California Annenberg School for Communication and Journalism. She has published 75 journal articles in referred journals (plus ten referred abstracts) in the top multi-disciplinary journals in the field and over 25 referred chapters; that work receives on average over 425 citations annually. She has received as PI/Co-PI over \$18M to fund her research. She uses virtual interactive and gaming technologies to study, predict, and reduce real-life risky decision-making for high-risk, diverse, community-based populations. The resulting game applications are designed to be both (1) scalable and capable of being rapidly diffused (e.g., through DVDs or the Internet) and (2) usable in neural (e.g., functional MRI) "test-beds" to better understand the complex dynamics of risky decision-making in challenging contexts for risky versus safe target populations. The goal is for researchers to better understand decision-making processes and why and how interventions might be effective (and where they may be failing some individuals) so that we can cumulatively adjust, test, and if more effective,

rapidly update and disseminate them broadly. Social computational models for these games (e.g., intelligent agents; neural networks) provide a meta-theoretical and methodological “backbone” for games used in these interventions. Much of her work over the last 30 years has focused on reducing risky sexual behaviors for men who have sex with men and other members of the GLBTQ community. Stigma has been a major variable in that work (and for interventions). In the last 5 years more of her work is focused on personality and mental health (especially depression and social anxiety) and how to leverage gaming and other technologies to understand and reduce the impact of these disorders.

Methods, Measures, and Quantitative Approaches. *This course is about methods, measures, and quantitative approaches.* Lynn Miller developed, validated and assessed the reliability of, and published 3 major scales that have been highly cited. Her published work demonstrates expertise in a wide range of methods and analytic approaches. Recently, Lynn Miller and her colleagues have argued for a new methodological paradigm for social science research referred to as Systematic Representative Design leveraging classic experimental design and sampling methods to afford greater built in capacity for causal inference and generalizability to everyday life (GEL).