

MMC 9002: Researching Communication I¹
Fall 2023

Tuesday, 5:30PM-8:00, Annenberg Hall 0001H
Klein College of Media and Communication
Temple University

Professor:

Dr. Bruce Hardy
(he/him/his)

Office Hours: MW 2:00pm – 4:00pm

Location: Weiss Hall 323 or online via zoom

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INSTRUCTOR BIO

Dr. Bruce Hardy is an Associate Professor in the Department of Communication and Social Influence and the Media and Communication Doctoral Program at Temple University. His research focuses on political, science, and health communication; knowledge acquisition, opinion formation, and behavior; emergent technologies and society; and advanced research methods. Dr. Hardy's research has been published in numerous academic journals including *Science*, *Proceedings of the National Academy of Science*, *American Behavioral Scientist*, *Science Communication*, *Public Opinion Quarterly*, *Journal of Communication*, *Communication Theory*, *Political Communication*, and *American Politics Research*. His research has won national and international scholarly awards from the American Publishers Association, the International Communication Association, the National Communication Association, and the Association for Education in Journalism and Mass Communication. Dr. Hardy is also a Distinguished Research Fellow with the University of Pennsylvania's Annenberg Public Policy Center.

COURSE DESCRIPTION

This course will introduce the processes of communication research, common quantitative research methodologies, and concepts of statistical literacy. No prior experience with statistics is required.

COURSE OBJECTIVES

By the end of this course, you should be able to:

- Understand various social science research methods in communication research
- Comprehend research that applies social science
- Design/launch a social science research study
- Perform data cleaning and analysis involving social science data

¹ This syllabus is subject to change at the instructor's discretion and progress of the class. Syllabus is partly based on the fall 2022 syllabus for this class by Dr. Meghna Tallapragada.

COURSE MATERIALS

You do not have to buy any reading materials for this course. All materials mentioned below for this course are available online via [Temple Library](#) or on your [Canvas](#) page for this course.

Required Software: Students will learn the basics of object-oriented programming, a foundational competency in the R language, the RStudio Integrated Development Environment, advanced data graphing tools, and many common basic and advanced statistical analyses from simple descriptive statistics to advanced multivariate techniques. Students can either sign up and use the cloud version at <https://posit.cloud/> or students can download R and RStudio directly to their computers. To download R go to <https://www.r-project.org/> and to download RStudio go to <https://posit.co/products/open-source/rstudio/>

Class attendance and participation (15%):

Generally, all students are expected to attend every class meeting and participate in class discussions to contribute to the learning in this class. Please respect others' feelings, beliefs, and values, so we can have a constructive discussion. If you start feeling uncomfortable to participate or are experiencing difficulties in expressing yourself during class, please let me know so we can resolve any issues or concerns in a timely manner. I am sure we can find a way to reduce or address any obstacles preventing you from attending or participating.

Collaborative Institutional Training Initiative (CITI) program certification (5%):

All individuals conducting research involving human research have to complete the online CITI training. You will need to complete the following training modules: 1) Human Subjects Research (Social/Behavioral) and Practice Runs. You can access the CITI training program here: <https://research.temple.edu/research-compliance/institutional-review-board-irb/irb-trainings-and-resources>

Homework (20%)

You will have short homework assignments throughout the semester. Assignments and rubrics (if needed) will be discussed in class and/or posted on Canvas.

Final paper (50%)

You are required to write an original research report/scholarly manuscript using the secondary data of your choice. You will work on your paper throughout semester and will be graded on the following components:

Prospectus	5%
Theoretical foundation	10%
Method/Analyses	15%
Paper Draft	10%
Final Paper	10%

At the end of the semester, you should have a completed manuscript that you can submit to conferences and, hopefully, a peer-reviewed journal.

End-of-semester presentation (10%)

On the last day of class, you are required to give a conference-style presentation of your final research paper.

Letter grading scale:

A: 95 - 100

A-: 90 - 94

B+: 87 - 89

B: 84 - 86

B-: 80 - 83

C+: 77 - 79

C: 74 - 76

C-: 70 - 73

D: 65 - 69

F: 64 - 0

COURSE CALENDAR

Week 1: August 29. Welcome and introduction to course.

Week 2. September 5. What is this thing called science?

Readings:

DeCoster, J., & Lichtenstein, B. (2007). Integrating quantitative and qualitative methods in communication research. *Communication Methods and Measures*, 1(4), 227-242.

<https://doi.org/10.1080/19312450701636599>

Scharrer, E., & Ramasubramanian, S. (2021). Foundations and definitions. In *Quantitative Research Methods in Communication: The Power of Numbers for Social Justice* (pp 1-22). Routledge: NY. <https://doi.org/10.4324/9781003091653>

Chalmers, A. (2013). Science as knowledge derived from the facts of experience. In *What is This Thing Called Science* (pp 1-17). University of Queensland Press: AUS.

<https://librarysearch.temple.edu/catalog/991036736679503811>

Week 3. September 12: Making inferences: Knowledge creation from hypothesis testing.

Readings:

Chalmers, A. (2013). Observation as practical intervention. In *What is This Thing Called Science* (pp 18-24). University of Queensland Press: AUS.

<https://librarysearch.temple.edu/catalog/991036736679503811>

Hayes, A. F. (2005). Statistics and communication science. In *Statistical Methods for Communication Science*. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

Hayes, A. F. (2005). Fundamentals of measurement. In Statistical Methods for Communication Science. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

#Homework 1 Due: Find a secondary dataset.

Week 4: September 19: Sampling designs, distributions, and descriptive statistics

Readings:

Hayes, A. F. (2005). Sampling. In Statistical Methods for Communication Science. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

Hayes, A. F. (2005). Fundamentals of Probability. In Statistical Methods for Communication Science. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

Hayes, A. F. (2018). Data description and visualization. In Statistical Methods for Communication Science. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

#For fun reading! (Optional) The R Manual: <https://cran.r-project.org/doc/manuals/r-release/R-intro.pdf>

#Prospectus Due

Week 5: September 26: Causal inference, types of error, and significance testing.

Readings:

Levine, T. R. (2011). Statistical conclusions validity basics: Probability and how Type 1 and Type 2 errors obscure the interpretation of findings in communication research literatures. *Communication Research Reports*, 28(1), 115-119. <https://doi.org/10.1080/08824096.2011.541369>

Holbert, R. L., Hardy, B. W., Park, E., Robinson, N. W., Jung, H., Zeng, C., Drouin, E., & Sweeney, K. (2018). Addressing a statistical power - alpha level blind spot in political- and health-related media research: discontinuous criterion power analyses. *Annals of the International Communication Association*, 42(2), 75-92. <https://doi.org/10.1080/23808985.2018.1459198>

Hayes, A. F. (2018). Comparing two independent groups. In Statistical Methods for Communication Science. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

#Homework 2 Due: Data cleaning and descriptive statistics

Week 6: October 3: Constructing surveys and Introduction to Qualtrics

Readings:

Kosciesza, A. J. (2022). Intersectional gender measurement: Proposing a new metric for gender identity and gender experience. *Feminist Media Studies*.
<https://doi.org/10.1080/14680777.2021.2018008>

Holbert, R. L. & Koshy, A. (2020). Question wording and item formulation. *The International Encyclopedia of Media Psychology*.
<https://doi.org/10.1002/9781119011071.iemp0035>

Hardy, B. W., & Tallapragada, M., Baik, E., & Koshy, A. Issue Ownership of Science in the US. Under Review at *Public Understanding of Science* (Available on Canvas)

#Homework 3: Hypotheses for our class survey

Week 7: October 10: Causal Inference and Experiments

Readings:

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experiments and general causal inference. *Experimental and Quasi-experimental designs for generalized casual inference* (pp. 1-32). (Available on Canvas)

Thorson, E., Wicks, R., & Leshner, G. (2012). Experimental methodology in journalism and mass communication research. *Journalism & Mass Communication Quarterly*, 89(1), 112-124. <https://doi.org/10.1177/1077699011430066>.

Hardy, B. W., Tallapragada, M., Besley, J. C., & Yaun, S. (2019). The effects of the “War on Science” frame on scientists’ credibility. *Science Communication*, 41(3), 90-112. <https://doi.org/10.1177/1075547018822081>

#Homework 4: Questions for our Qualtrics Survey

Week 8: October 17: ANOVA, Regression, and the predictive power of inferential statistics.

Readings:

Hayes, A. F. (2018). Simple Linear Regression. In *Statistical Methods for Communication Science*. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

Hayes, A. F. (2018). Multiple Linear Regression. In *Statistical Methods for Communication Science*. <https://doi-org.libproxy.temple.edu/10.4324/9781410613707>

#Homework 5: Send out survey to friends/family/etc. to get responses!

Week 9: October 24: Mediation and Moderation

Readings:

Hardy, B. W., & Tallapragada, M. (2021). The moderating role of interest in politics and news consumption in the relationship between political ideology and beliefs about science and scientists in the United States. *Group Processes & Intergroup Relations*, 24, 783-796. <https://doi.org/10.1177/13684302211013913>

Hardy, B. W., & Castonguay, J. (2018). The moderating role of age in the relationship between social media use and mental well-being: An analysis of the 2016 General Social Survey. *Computers in Human Behavior*, 85, 282-290. <https://doi.org/10.1016/j.chb.2018.04.005>

Tallapragada, M., Hardy, B. W., Lybrand, E., & Hallman, W. K. (2021). Impact of abstract versus concrete conceptualization of genetic modification (GM) technology on public perceptions. *Risk Analysis*, 41(6), 976-991. <https://doi.org/10.1111/risa.13591>.

#Theoretical Foundation Due

Week 10: October 31: Content analysis

Readings:

Krippendorff, K. (2019). Conceptual foundation. *Content Analysis: An Introduction to its Methodology* (pp. 24-50). <https://dx.doi.org/10.4135/9781071878781.n3>

Lacy, S., Watson, B. R., Riffe, D., & Lovejoy, J. (2015). Issues and best practices in content analysis. *Journalism & Mass Communication Quarterly*, 92(4), 791-811. <https://doi.org/10.1177/1077699015607338>

Hayes, A. F., & Krippendorff, K. (2007) Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures*, 1(1), 77-89. <https://doi.org/10.1080/19312450709336664>

#Method/Analyses section due

Week 11: November 7: Computational Text Analysis

Readings:

Welbers, K., van Atteveldt, W., & Benoit, K. (2017). Text analysis in R. *Communication Methods and Measures*, 11(4), 245-265. <https://doi.org/10.1080/19312458.2017.1387238>

- For the code:

https://github.com/kasperwelbers/text_analysis_in_R/blob/master/files/Text_Analysis_in_R.md

- For the dataset: <https://www.kaggle.com/datasets/uciml/sms-spam-collection-dataset>

Silge, J. & Robinson, D. (2022). Introduction to tidytext. <https://cran.r-project.org/web/packages/tidytext/vignettes/tidytext.html>

Week 12: November 14: Class check-in, review, see how we are all doing, and help with final paper.

No readings

#Paper Draft Due

Week 13: November 22: **NO CLASS FALL BREAK!**

Week 14: November 28: A glimpse into other advance methods in communication

No readings: work on your final paper!!!

Week 15: December 5: Class presentations!

#Final Paper Due

#Class Presentation Due

Course Expectations & Policies

- **Professionalism:** Maintaining a safe and respectful class environment is a priority in this course. The instructor reserves the right to deduct points and/or turn matters over to the University Disciplinary Committee for any unprofessional behavior such as being disrespectful towards the instructor, guest instructor, or fellow students.
- **Late submissions:** I do not accept late submissions unless there are extenuating circumstances. All requests for late submission should be shared at least three business days before the assignment is due, unless there was an emergency.
- **“All on email” policy:** All requests for extensions and excused absences should be via email and should occur at least three business days prior to the deadline. Please be sure to follow all oral agreements via email. Save all email agreements for this course.
- **Grade dissatisfaction:** Any dissatisfaction with grades must first be explained in writing with specific references to the material in question within 36 hours of getting your grade and followed up with a 30-minute meeting with the instructor. Submitting a dissatisfaction and/or following up with a meeting does not guarantee a grade change, however it will allow for an opportunity to discuss the grade in more detail. If there has been a miscalculation or a mistake in grading, then approach the instructor immediately.
- **Students with Disabilities:** Any student who has a need for accommodation based on the impact of a disability should contact me privately to discuss the specific situation as soon as possible. I will try my best to initiate and maintain a welcoming environment for all students, including those with a disability. It is Temple University’s policy to provide reasonable accommodations to students with disabilities under the American Disabilities Act (ADA). It is Temple University’s policy that any student who has a need for accommodations based on the impact of a documented disability or medical condition should contact Disability Resources and Services (DRS) (drs@temple.edu; 215-204-1280) to request accommodations

and learn more about the resources available to you. If you have a DRS accommodation letter to share with me, or you would like to discuss your accommodations, please contact me as soon as practical. I will work with you and with DRS to coordinate reasonable accommodations for all students with documented disabilities. All discussions related to your accommodations will be confidential. At the beginning of each semester, any student with a disability should inform the course instructor if instructional accommodations or academic adjustments will be needed. For more information about the ADA and academic accommodations or adjustments, contact the Office of Disability Resources and Services (<http://www.temple.edu/disability>; Ph: 215-204-1280; drs@temple.edu).

- Disabilities are NOT limited to learning difficulties and include medical illnesses (anemia, irritable bowel syndrome, migraines, etc.), and mental or emotional illnesses that have been diagnosed by a medical doctor or therapist. Accommodations can include many things beyond adjusted testing times. Please consult with disabilities services regarding eligibility for accommodations if you feel you have any of these illnesses. Exceptions to course policies for students with disabilities will not be granted without notification from Disability Resources and Services.
- Care: Please be aware that you have medical care available for you as a full- or part-time student at Temple University. The student health center has early morning, evening, and Saturday appointments. You are entitled to private and confidential mental health counseling as a full- or part-time student at Temple University. There are several walk-in hours available in mornings, evenings, and on Saturdays. The student counseling center is located at 1700 North Broad St., 4th Floor. (215) 204-7500. You can also call psychiatric services at (215) 707-2577.
- Academic Rights: The University has adopted a policy on student and faculty academic rights and responsibilities (Policy # 03.70.02) which can be accessed through the following link: http://policies.temple.edu/getdoc.asp?policy_no=03.70.02
- Plagiarism: Temple University believes strongly in academic honesty and integrity. Plagiarism and academic cheating are, therefore, prohibited. Essential to intellectual growth is the development of independent thought and a respect for the thoughts of others. The prohibition against plagiarism and cheating is intended to foster this independence and respect. I reserve the right to refer any cases of suspected plagiarism or cheating to the University Disciplinary Committee.
 - Plagiarism is the unacknowledged use of another person's labor, another person's ideas, another person's words, and another person's assistance. Normally, all work done for courses -- papers, examinations, homework exercises, laboratory reports, oral presentations -- is expected to be the individual effort of the student presenting the work. Any assistance must be reported to the instructor. If the work has entailed consulting other resources -- journals, books, or other media -- these resources must be cited in a manner appropriate to the course. Everything used from any source -- suggestions for organization of ideas, ideas themselves, or actual language -- must be cited. Failure to cite borrowed material, including materials from online sources, constitutes plagiarism.
 - Academic cheating is, generally, the thwarting or breaking of the general rules of academic work or the specific rules of the individual courses. It includes falsifying data; submitting, without the instructor's approval, work in one course which was done for another; helping others to plagiarize or cheat from one's own or another's work; or actually doing the work of another person. The penalty for academic dishonesty can vary

from receiving a reprimand and a failing grade for a particular assignment, to a failing grade in the course, to suspension or expulsion from the University. The penalty varies with the nature of the offense, the individual instructor, the department, and the school or college. (<https://bulletin.temple.edu/undergraduate/about-temple-university/student-responsibilities/#academichonesty>)

- Klein College of Media and Communications Grievance/Grade Appeal Policy: A grade appeal may only be pursued after the completion of the semester in which the alleged improper, unfair, or arbitrary academic action took place.
- Course & Teaching Evaluations: Student feedback regarding instruction is an integral part of assuring quality in the University's educational programs. Student evaluations of faculty occur toward the end of semester. This is your opportunity to voice your opinion regarding my effectiveness and the course overall. Also, this process allows you to assist us as we strive to constantly improve upon efforts and make this a better experience for those students who follow you. For more information about student evaluations of courses and teaching, please refer to [Policy #02.78.14](#) which can be found on the University's Policy & Procedures website at <http://policies.temple.edu>.
- University Writing Center for Students: The University Writing Center provides services to students across the University. These services include tutoring, technology, a computer classroom, a resource library, workshops, and seminars. Many of these services, including tutoring, are accessible online through the Center's Website at <https://studentsuccess.temple.edu/programs/writing>. All services are free-of-charge to you. Tutoring services are offered by appointment.
- Please note that the instructor DOES NOT consent to her lecture, class discussions, etc., being recorded by students or anyone for later distribution through channels such as social media, email, etc.