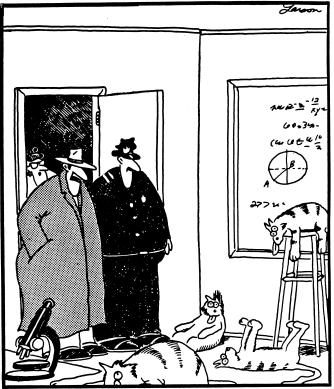# Annenberg School for Communication and Journalism
University of Southern California

Syllabus for

COMM 550: Quantitative Research Methods in Communication
Spring Semester 2012; Wednesday 9:00-11:50, ASC 328
Course Website URL: https://blackboard.usc.edu/webapps/login/

"Notice all the computations, theoretical scribblings, and lab equipment, Norm. ... Yes, curiosity killed these cats."

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Course Description

COMM 550, Quantitative Research Methods in Communication, is designed to introduce students to the basics of quantitative communication research. As such, it covers essential ideas in theory, hypothesis generation, research design, instrumentation, data collection, and data analysis. Related topics on validity, reliability, and ethical issues in conducting research on humans are also covered. An important portion of the class is devoted to a survey of univariate statistics, which includes topics on the nature of quantitative data, the logic of statistical inference, and various statistical tests such as analysis of variance, regression, nonparametric statistics, and time series analysis. A set of computer lab assignments will give students extensive opportunity to become familiar with the SPSS computer software package and experience at computing the various statistics reviewed in the class. Perhaps most important, each student will conduct a research project, putting into practice the theorizing, design, instrumentation, and analysis skills acquired throughout the class. The written report should be prepared in accordance with the professional criteria specified in the Publication Manual of the American Psychological Association (6th ed.) modified as necessary by the Information for Authors statement of a target journal. Thus, this course is designed to provide both a broad overview of the research process and practical experience in conducting quantitative empirical research.

Texts

Required:

Green, S.B., & Salkind, N.J. (2007). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (5th. ed.). Upper Saddle River, NJ: Prentice Hall. (ISBN 0131890255; ppk)

Hayes, A. F. (2005). *Statistical methods for communication science.* Mahwah, NJ: Lawrence Erlbaum Associates.

Kerlinger, F. N. , & Lee, H. (2000). *Foundations of Behavioral Research* (4th ed.) Harcourt. (ISBN: 0-15-507897-6, Hardcover)

Publication Manual of the American Psychological Association (6th ed.). (2009). Washington, D.C.: American Psychological Association. (ISBN 1-4338-0561-8, ppk)

Recommended:

Williams, F., & Monge, P. (2000). *Reasoning with statistics: How to read quantitative research* (5th ed.). New York: Harcourt College Publishers.

Labs

Weekly labs provide experience analyzing data, computing statistics, and performing some of the other data related activities in the class. You will learn to use the SPSS computer software package for data management and analysis. The introductory lab will not be graded. The remaining ten labs will be worth 2% each and must be successfully completed in order to receive a grade in the course. Labs turned in late will be eligible for only half credit.

Research Project

An important part of this course is designing and conducting a research project. This semester-long process is designed to give you personal experience in all the major components of doing research. As such, you will need to (1) learn a communication theory and master the recent research pertaining to that theory, (2) generate new hypotheses or research questions, (3) design the study, (4) develop or modify the research instruments, (5) gather the data, (6) analyze the results, and (7) write the research report.

Everyone will submit the paper in four sections: (1) Theory and hypotheses, (2) Method, (3) Results, and (4) Discussion. Human Subject forms must be properly completed and submitted to the Annenberg Delegated Institutional Review Board. Due dates are listed in the course outline. A fifteen minute presentation on your research is due on the last day of class, with the actual final paper due at the time of the Final Examination. Papers, including the separate sections, should be submitted electronically, preferably in Word format, or in rich text format if you use another word processing system.

Research Exemplars

Assignments for most weeks include a journal article research exemplar for the topic of the day. Two students will lead class discussion for each article helping to highlight the strengths and weaknesses of each exemplar.

Evaluation

Your grade in this class will consist of four components as follows:

Research Paper:	35%
Midterm Exam:	20%
Final Exam:	25%
Labs:	20%
Total	100%

Academic Integrity

The School of Communication is committed to the highest standards of ethical conduct and academic excellence. Any student found guilty of plagiarism, fabrication, cheating on examinations, purchasing papers or other assignments, or any other form of academic dishonesty will receive a failing grade in the course from the instructor and the School will recommend that the student be dismissed from the Communication program. There are no exceptions to this policy.

Course Outline

Week 1, January 11: Introduction

  Class Lecture and Discussion Topics:

    Introduction to the Class
    Review of the Syllabus
    Overview of the Research Paper
    Overview of the Labs

  Assignments:

    Davis, M. S. (1971). That's interesting: Towards a phenomenology of sociology
       and a sociology of phenomenology. *Philosophy of Social Science*, *1*, 309-344.

    Theory Clusters – Choose 4 of the 9 different theory clusters. For each, read all
    of the theories listed. Post to the Discussion Board on Blackboard why you think
    those theories are interesting. After you have written your own thoughts, respond
    to previous posts by your classmates.

Week 2, January 18: Scientific Inquiry and Communication Theory

  Class Lecture and Discussion Topics:

    Discuss Theory Clusters
    Discuss Davis
    What is Scientific inquiry? *FBR*, Cp. 1
    Statistics and Communication Science. Hayes, Cp. 1

    Optional Reading:
    Pavitt, C. (1999). The third way: Scientific realism and communication theory.
       Communication Theory, 9, 162-188.
    Why Do Quantitative Research? Statistics and Research. *RWS*, Cps. 1, 2

Assignments:

Lab# 1: Overview of SPSS; *USPSS* Unit 1, 2, & 4: Getting Started with SPSS (Assignment Due: January 25).

Research idea development – From your selected communication theories, choose one topic and review relevant literature published in the past 6-8 years in major journals in communication and related field. In your literature review, pay special attention to what knowledge claims are made, how they are supported or not, and what the current state of knowledge is in this area. Write a 3-4 page report that summarizes the major findings and identifies the additional topics for future research. Also attach a list of relevant references**.** (Assignment Due: February 1**).**

Assignment Due: Theory Clusters Posts

Week 3, January 25: Concepts, Measurement, and Distributions

Class Lecture and Discussion Topics:

Concepts and definitions, *FBR,* Cp. 3 (Optional: RWS, Cp. 3)

A Framework for Statistics: Monge, P. (1990). Theoretical and analytical issues in studying organizational processes. *Organization Science*, *1*, 406-430.

Levels of Measurement, *FBR*, Cp. 26 – 28
Fundamentals of Measurement. Sampling. Data Description and Visualization Hayes, Cps. 2 – 4.
Describing Distributions *FBR*, Cp. 7, 8 (Optional: RWS, Cp. 4)

Manuscript Structure and Content, Writing Clearly and Concisely, *PMAPA*, Cps. 2 & 3

Example for Discussion: Lee, K. (2004). Presence, explicated. *Communication Theory*, *14*, 27-50.

Assignments:

Lab # 2: *USPSS*: Unit 5: Descriptive Statistics (Due February 1)

Assignment Due: Lab #1

Week 4, February 1: Research Design, Protection of Human Subjects, Parameter Estimation

Class Lecture and Discussion Topics:

Research Design, *FBR*, Cp. 18-20

Ethical Issues in Research, *FBR*, Cp. 17
Human Subjects, University Research Board Review Process

Fundamentals of Probability. Parameter Estimation. Hayes, Cps. 5 & 7
(Optional: Predicting Parameters, *RWS*, Cp. 5)

Writing for the Behavioral and Social Sciences, *PMAPA*, Cp. 1

Example for Discussion: Burleson, B. R., Holmstrom, A. J., & Gilstrap, C. M.
(2005). "Guys can't say that to guys": Four experiments assessing the
normative motivation account for deficiencies in the emotional support
provided by men. *Communication Monographs*. 72(4), 468-501.

Assignments:

Lab #3 *USPSS* Unit3: Working with Data

Assignment Due: Lab #2

Assignment Due: Research idea development paper (Journal review)

Week 5, February 8: Non-Experimental Designs and Hypothesis Testing

Class Lecture and Discussion Topics

Quasi-Experimental Designs, *FBR*, Cp. 22
Non-experimental Research, *FBR*, Cp 23

Testing Hypotheses, *FBR*, Cp. 2, 12 (Optional: *RWS*, Cp. 6)
Hypothesis Testing Concepts, Hayes, Cp. 8

The Mechanics of Style. *PMAPA,* Cp. 4

Example for Discussion: Miller, C. H., Lane, L. T., Deatrick, L. M., Young, A.
M., & Potts, K. A. (2007). Psychological reactance and promotional health
messages: The effects of controlling language, lexical concreteness, and the
restoration of freedom. *Human Communication Research.* 33(2), 219–240.

Assignments:

Lab #4: Internal and External Validity & Generating Hypotheses for Your Research

Assignments Due: Lab #3

Complete CITI training

Week 6, February 15: Laboratory Experiments & *t*-tests

Class Lecture and Discussion Topics

Laboratory Experiments, *FBR*, Cp. 24
The *t* test, *FBR*, Cp. 13 (Optional: , *RWS*, Cp. 7)
Testing a Hypothesis about a Single Mean, Hayes, Cp. 9

Displaying Results, *PMAPA*, Cp. 5

(*Examples for Discussion*) Walther, J. B., Van Der Heide, B., Hamel, L. M., & Shulman, H. C. (2009). Self-generated versus other-generated statements and impressions in computer-mediated communication: A test of warranting theory using facebook. *Communication Research, 36*(2), 229-253.
Hollingshead, A. (1998). Retrieval processes in transactive memory systems. *Journal of Personality and Social Psychology*, *74*, 659-671.

Assignments:

Lab #5: *USPSS* Unit 6: Hypotheses-Testing Using t-test

Assignment Due: Lab # 4

Assignment Due: Research paper Theory section (including hypotheses)

Week 7, February 22: Observational Research and Analysis of Variance

Lecture and Discussion Topics:

Survey Research: *FBR*, Cp. 25
Observational Research: *FBR*, Cp. 31

Analysis of Variance: *FBR*, Cp. 13, 14 (Optional: *RWS*, Cp. 8)
Comparing Two Independent Groups, Single Factor Analysis of Variance, Hayes, Cps. 10 & 14

Crediting Sources, Reference Examples, *PMAPA*, Cps. 6 & 7

Example for Discussion: Nabi, R. L. (2009). Cosmetic surgery makeover programs and intentions to undergo cosmetic enhancements: A consideration of three models of media effects. *Human Communication Research, 35*(1), 1-27.

Assignments:

Lab #6 *USPSS* Unit 7: Univariate Analysis of Variance

Assignment Due: Lab #5

Week 8, February 29: Factorial Designs

Lecture and Discussion Topics:

Interaction, Hayes, Cp. 16 (Optional, *RWS*, Cp. 9)

Discussion Example: Ritterfeld, U., Klimmt, C., Vorderer, P., & Steinhilper, L.K. (2005). The effects of a narrative audiotape on preschoolers' entertainment experience and attention. *Media Psychology, 7*, 47-72.

Assignements:

Lab #7 Factorial Design and Developing Survey Instrument

Assignment due: Research paper Method section

Week 9, March 7: Midterm Exam

Midterm Exam

Example: Johnston, A. & Kaid, L. L. (2002). Image ads and issue ads in U.S. presidential advertising: Using Videostyle to explore stylistic differences in televised political ads from 1952 to 2000. *Journal of Communication.* 52(2), 281–300.

Assignments:

Lab #8 *USPSS* Unit 10: Nonparametric Procedures

Assignment Due: Lab #6

Assignment Due: Submit Annenberg Institutional Review Board forms

Week 8 (Spring Break)

    Enjoy!

Week 9: March 21: Nonparametric Tests, Reliability & Vallidity

    Lecture and Discussion Topics:

        Nonparametric Tests, *FBR*, Cp. 16 (Optional: *RWS*, Cp. 10)
        Some Tests for Categorical Variables, Hayes, Cp. 11

        Reliability, *FBR*, Cp. 27
        Validity, *FBR*, Cp. 28
        Correlation, *RWS*, Cp. 11
        Assessing and Quantifying Reliability, Hayes, Cp. 6

        Example for Discussion: Kelly, L. & Keaten, J. A. (2007). Development of the
            Affect for Communication Channels Scale. *Journal of Communication.* 57(2),
            349–365.

    Assignments:

        Lab #9 *USPSS* Unit 8 (pp. 257-274): Correlation & Partial Correlation; Unit 9
            (325-348) Reliability

    Assignments Due: Lab #7 & #8

Week 10, March 28:

        Regression & Multiple Regression. *FBR,* Cp. 32, Hayes, Cps. 12 & 13, (Optional
            RWS, Cps 12 & 13)

        Writing the Research Report, *FBR*, Appendix A
        The Publication Process, *PMAPA*, Cp.8, & Appendix on Journal Article
            Reporting Standards (JARS)

        Example for Discussion: Wood, M. L. M. (2007). Rethinking the inoculation
            analogy: Effects on subjects with differing preexisting attitudes. *Human
            Communication Research.* 33(3), 357–378.

    Assignments:

        Lab #10 *USPSS* Unit 8 (pp.275- 299): Bivariate Linear Regression and Multiple
            Regression

    Assignment Due: Research paper Results section

Assignment Due, Lab # 9

Week 11, April 4: Factor Analysis

Lecture and Discussion Topics:

Factor Analysis, *FBR*, Cp. 34 (Optional: *RWS*, Cps 15)

Example for Discussion: Kiousis, S. (2004). Explicating media salience: A factor analysis of *New York Times* issue coverage during the 2000 U.S. presidential election. *Journal of Communication.* 54(1), 71–87.

Assignments:

Lab #11a *USPSS* Unit 9: Factor Loading (pp.313-324)

Lab #11b: Time Series Analysis

Assignment Due: Lab #10

Week 12, April 11: Time Series Analysis

Lecture and Discussion Topics:

Time Series Analysis: *RWS*, Cps 16; *FBR*, Cp. 22

Example: Hester, J. B. & Gibson R. (2003). The economy and second-level agenda setting: A time-series analysis of economic news and public opinion about the economy. *Journalism and Mass Communication Quarterly*. 80(1), 73-90

Assignments:

Assignment Due: Research paper Discussion section

Week 13, April 18: Presentation of Research Projects

Presentations of Research Projects

Assignments:

Assignment Due: Lab #11

Week 14, April 25: Presentation of Research Projects

Presentation of Research Projects

Week 15, May 2: Final Exam

Final Exam

Week 15, May 4: Final Papers Due

Final Research Papers Due