

# CMST 7915: COMMUNICATION THEORY

Research Methods in Communication

Fall 2012, MW 3:30-4:50, Coates 127

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*Do not put your faith in what statistics say until you have carefully considered what they do not say. ~William W. Watt*

*The average human has one breast and one testicle. ~Des McHale*

*While the individual man is an insoluble puzzle, in the aggregate he becomes a mathematical certainty. You can, for example, never foretell what any one man will be up to, but you can say with precision what an average number will be up to. Individuals vary, but percentages remain constant. So says the statistician. ~Arthur Conan Doyle*

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*The manipulation of statistical formulas is no substitute for knowing what one is doing. ~ Hubert M Blalock Jr (Social Statistics)*

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## **Course Overview**

This course provides an in-depth examination of research methods in communication theory. The course will introduce students to the basic processes of quantitative research including the role of theory, design, and statistics. Students will be introduced to a number of descriptive and inferential statistical techniques, including measures of central tendency and dispersion, t-tests, ANOVA, correlation, and regression analysis, among others. Students will also become acquainted with SPSS and use this package in completing a number of assignments. No prior knowledge of research methodology or statistics is assumed.

## **Texts**

1. American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6<sup>th</sup> ed.). Washington, DC: American Psychological Association.
2. Frey, L. R., Botan, C. H., & Kreps, G. L. (2000). *Investigating communication: An introduction to research methods* (2<sup>nd</sup> ed.). Boston: Allyn and Bacon.
3. Allen, M., Titsworth, S., & Hunt, S. K. (2009). *Quantitative research in communication*. Thousand Oaks, CA: Sage
4. Hayes, A. F. (2005). *Statistical methods for communication science*. Mahwah, NJ: Erlbaum.

In addition, there will be a small number of other assigned readings drawn from journal articles and book chapters.

## **Exams**

There will be 3 exams given during the course of the semester. These exams will consist of questions covering both conceptual material and computational procedures drawn from lectures and reading assignments. If necessary, there will also be quizzes.

## **Assignments**

There will be a number of graded problem sets and computer assignments.

## Final Paper

You will conduct a research study on a communication topic of your choice. You must review a body of literature, provide a rationale for a specific hypothesis or research question, develop a procedure for testing your hypothesis, collect data, analyze your results using basic statistical techniques, and discuss your findings in light of existing theory. You must meet with me at least three times about your paper – (1) as you develop your topic, (2) as you finalize the methodology, and (3) as you conduct your statistical analysis.

Part one of your paper (the literature review, hypotheses/research questions, proposed method; IRB application) is due no later than September 22. The complete paper is due no later than December 3. It will be graded for clarity of writing, quality of argument, rigor of proposed method, correct use of statistical procedures, and accurate interpretation of findings.

## Grading

| <u>Source</u>      | <u>Percentage of Final Grade</u> |
|--------------------|----------------------------------|
| Graded Assignments | 10                               |
| Exam 1             | 15                               |
| Exam 2             | 20                               |
| Final Exam         | 25                               |
| Final Paper        | 30                               |

The grade you EARN for this class will be based on a formula that weights the five items listed above by their respective percentages. **For all assignments, you will earn a letter grade.** These letter grades nicely correspond to a traditional 4.0 scale, where a 4.0 equals and grade of “A” as follows:

|           |           |
|-----------|-----------|
| A+ = 4.33 | C = 2.0   |
| A = 4.0   | C- = 1.67 |
| A- = 3.67 | D+ = 1.33 |
| B+ = 3.33 | D = 1.0   |
| B = 3.0   | D - = .67 |
| B- = 2.67 | F+ = .33  |
| C+ = 2.33 | F = 0.0   |

## Course Outline

- I. Introduction and Overview
- II. Science as an Approach to the Study of Communicative Phenomena
- III. Measurement, Research Design, and Ethics
- IV. Frequency Distributions, Measures of Central Tendency, and Variability
- V. Normal Curve and z Scores
- VI. Introduction to Inferential Statistics
  - A. Sampling and Statistics
  - B. The Logic of Hypothesis Testing
- VII. T-tests
- VIII. Introduction to Analysis of Variance
- IX. Correlation Coefficients
- X. Introduction to Regression Analysis
- XI. Introduction to Nonparametric Statistics