

Comm 6020 – Quantitative Methods

Tuesdays

3:30-6:00 pm

HELLEMS 77

World's Most Accurate Pie Chart



Professor

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Phone

303-492-2824

Office Hours

Thursdays 1:00-2:00
and by appointment

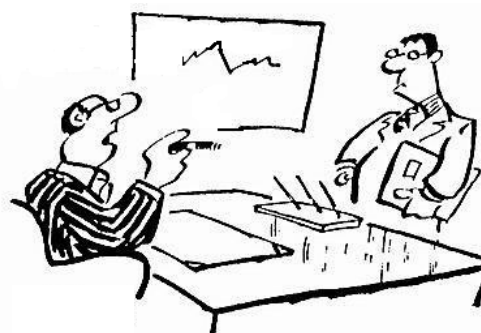
Skype

matt_koschmann

COURSE OBJECTIVES

The purpose of this course is to develop a basic understanding of quantitative research methods...aimed especially at graduate students for whom quantitative methods is NOT their primary research methodology, or students who need an introductory course as a foundation for future quantitative coursework.

Accordingly, this course focuses on "quantitative literacy" and provides an overview of the necessary information needed for basic quantitative analysis and subsequent coursework on more advanced quantitative methods. In addition to learning foundational concepts, the course incorporates a number of in-class labs with the computer program SPSS for a hands-on approach to statistical analysis.



"That's what I want to say. See if you can find some statistics to prove it."

The course emphasizes survey research as a primary aspect of quantitative methodology, and the semester project involves developing a survey instrument for data collection and analysis. We also spend a fair amount of time discussing "critical reflections on quantitative research" where we explore the difficulties of quantifying social phenomena and the problematic ways in which statistics are used in public discourse.

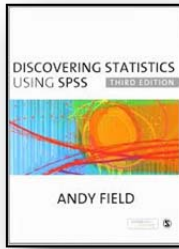
Topics covered include:

- Correlation
- Regression
- Comparing means
 - t-tests
 - ANOVA
- Factor analysis
- Survey design
- Chi square
- Quantitative analysis of texts
- Critical reflections on quantitative research

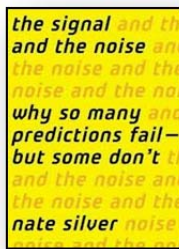
Topics discussed (but not covered in-depth):

- Logistic regression
- Multilevel analysis
- ANCOVA & MANOVA
- Non-parametric tests
- Repeated measures designs
- Path analysis
- Structural equation modeling

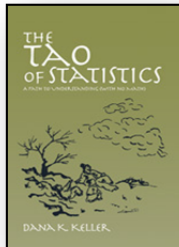
COURSE MATERIALS



Field, A. (2009). *Discovering Statistics Using SPSS*. (3rd edition). Thousand Oaks, CA: SAGE.



Silver, N. (2012). *The Signal and the Noise*. Penguin Press.



Keller, D. K. (2006). *The Tao of Statistics*. Thousand Oaks, CA: SAGE.



Selected readings posted on Desire2Learn (D2L)



Lab assignments and data sets using SPSS
(laptops with SPSS will be provided in class)

ASSIGNMENTS

All assignments are graded on a 100-point scale and weighted by the percentages listed below

Midterm Exam

20%

This exam will cover all the material before spring break.

Homework/labs

30% (6x5%)

Throughout the semester we will complete a series of in-class labs with the statistics computer program SPSS, plus accompanying homework assignments. All data sets and other materials will be provided for you. On lab days check out a CommTac laptop with SPSS for use in class. Labs are due before the start of the subsequent class.

Application Artifacts

10%

For this assignment you will bring an artifact to class that illustrates some aspect of quantitative methods we've been examining in class (e.g., a text, case, video, magazine/newspaper article, current event, blog, etc.). The objective is to explain how the artifact illustrates our course material and provokes critical thinking about quantitative methods. You will facilitate a ~15 minute discussion about your application artifact, including questions for the class. You need to present **two application artifacts** during the semester. There is nothing to submit for this assignment...you will only be graded on the presentation of your artifact and your facilitation of the discussion (more details below).

Final Project

30%

This semester we have an opportunity to work with a variety of community organizations to develop empirical research projects. You will be divided into small research teams and assigned to a specific organization/project. You will work with a designated point person to develop an empirical research project involving data gathering and analysis. You will write an executive report for your organization and an academic paper for me (more details below).

Class Participation

10%

This is a discussion-based class where much of the learning comes from your interaction with other students, the professor, and the material. Therefore your participation plays an important role in the development of the course. Here are the main things that influence your participation grade:

- Consistent, substantive involvement in class discussions
- No more than 1 absence (not including legitimate excuses)
- Not consistently late or leave early
- Not a distraction in class

GRADING

This course follows the standard CU grading system.

A	93% and above	C	73 – 76.5%
A -	90 – 92.5%	C -	70 – 72.5%
B +	87 – 89.5%	D +	67 – 69.5%
B	83 – 86.5%	D	63 – 66.5%
B -	80 – 82.5%	D -	60 – 62.5%
C +	77 – 79.5%	F	59% or below

I use the following criteria to guide my grading decisions:

A	Excellent...exceeds the minimum requirements with distinction
B	Good...goes beyond the minimum requirements to a fair degree
C	Average...meets the minimum requirements of the assignment
D	Poor...only meets some of the minimum requirements of the assignment
F	Failing...does not meet most of the minimum requirements of the assignment

Additional grade considerations

The only thing I grade is your product...not your effort or intentions. I don't grade based on what you need to keep a certain GPA or what you think you're entitled to.

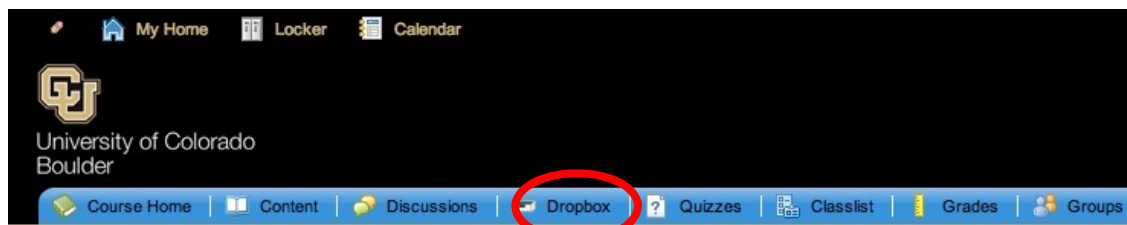
I'm happy to discuss any graded assignment with you, but please wait 24 hours after receiving your grade for any discussions.

I love to talk with students about their assignments BEFORE they are due. After assignments are due there is very little I can do, other than to explain my decisions.

OTHER COURSE POLICIES

Paper Submissions

Please submit all papers electronically through the dropbox feature in Desire2Learn:



All files should be Microsoft Word version 03 or later. Save your file using your last name (ex: Koschmann.doc)

Disabilities

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services (DS) by the end of the second week of the semester so that your needs may be addressed. DS determines accommodations based on documented disabilities (303-492-8671, Willard 322, www.colorado.edu/sacs/disabilityservices)

Religious Observance

I will make reasonable accommodations for students who have conflicts between religious observance dates and course requirements. Please approach me with these requests before the end of the second week of the semester.

Academic Misconduct

Cheating, plagiarism, or unacknowledged assistance is unacceptable. Web-based plagiarism-detection services will be utilized. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Please see the Honor Code at <http://www.colorado.edu/academics/honorcode/>

Technology

Technology Across the Curriculum is the Communication Department's technology resource. TAC provides equipment such as laptops, digital video cameras, and digital voice recorders to students for checkout. For more information, visit TAC at <http://comm.colorado.edu/tac>.

Deadlines

Unless otherwise noted, all assignments are due on the date/time indicated in the daily schedule. Late work is not accepted unless you contact me prior to the due date with a legitimate reason.

ASSIGNMENT DETAILS – APPLICATION ARTIFACT

For this assignment you will bring an artifact to class that illustrates some aspect of quantitative methods we've been examining in class (e.g., a text, case, video, magazine/newspaper article, current event, blog, etc.). The objective is to explain how the artifact illustrates our course material and provokes critical thinking about quantitative methods. You will facilitate a ~15 minute discussion about your application artifact, including questions for the class. You need to present **two application artifacts** during the semester.

There is nothing to submit for this assignment...you will only be graded on the presentation of your artifact and your facilitation of the discussion. I will assess work based on:

- Relevance and substance of your artifact
- Your explanation of how the artifact illustrates some aspect of our course material
- Your ability to ask provocative questions and facilitate conversation
- Your ability to summarize the discussion and develop insightful conclusions

ASSIGNMENT DETAILS – FINAL PROJECT

For this assignment you will complete a full empirical research project on a topic/problem/issue of your choice, preferably related to your specific field of study. This includes a compelling rationale for the investigation, a review of the relevant literature, a thorough description of the research methodology and analysis of the data, and a discussion of the conclusions and contributions your study, as well as any limitations and suggestions for future research.

This project should use a **survey methodology** for data collection. You are welcome to collect actual empirical data, use existing data sets, or even make up your data (I don't want data collection to be a burden that takes away from the more important aspects of this project). The primary focus for this assignment is how you design your study and analyze the data.

Your project is divided into two components with the following evaluation criteria:

Proposal

20%

- Initial articulation of the intellectual problem, issue, or question under investigation...plus a statement about the rationale for your study
- Explanation of concepts and constructs
- Explanation and operationalization of dependent and independent variables (including measurement levels)
- Initial research questions and/or hypotheses
- Statement about data collection and analysis (including specific statistical tests)
- Statement about ensuring validity and reliability

***A final project proposal template will be posted on D2L*

Final Manuscript

80%

- Quality intellectual problem, issue, or question...and a compelling rationale for the investigation
- Substantive review of relevant literature
- Structure (intro, lit review, methods, analysis/results, discussion/conclusion)
- Quality writing (spelling, grammar, transitions, clarity, etc.)
- Correct research methodology and analysis of data
- Validity and reliability of findings
- Insightful discussion about the conclusions and contributions of the investigation

TENTATIVE DAILY SCHEDULE

Date	Topic	Assignments/Readings
Jan 15	Course Introduction	Reading #1: Corman (2005) Field ch. 1
	Introduction to Quantitative Research	
Jan 22	Statistics Overview	Field ch. 2 & 5 Keller ch. 1-17
Jan 29	Introduction to SPSS	Field ch. 3 & 4
	Intro Lab	Keller ch. 18-31, 33-35
Feb 5	Correlation	Field ch. 6
	Lab #1	Keller ch. 36
Feb 12	Regression	Field ch. 7
	Lab #2	Keller ch. 37
Feb 19	Comparing Two Means	Field ch. 9
	Lab #3	Keller ch. 39
Feb 26	Comparing Multiple Means	Field ch. 10
	Lab #4	Keller ch. 39 (a)
Mar 5	Factor Analysis & survey design	Field ch. 17
	Lab #5	Keller ch. 43
Mar 12	Categorical Data	Field ch. 18
	Lab #6	Keller ch. 32
	Exam Review	----- Final project proposals due: Friday, Mar 15th @ 11:59 pm
Mar 19	Midterm Exam	

Mar 26	NO CLASS – SPRING BREAK	
April 2	<p>Misc. Topics:</p> <ul style="list-style-type: none"> ▪ Logistic regression ▪ Multilevel models ▪ ANCOVA, MANOVA ▪ Non-parametric tests ▪ Repeated measures designs ▪ Path analysis ▪ Structural equation modeling 	<p>Field ch. 8, 11, 15, 13, 16, 19 <i>Not required reading...just skim for basic understanding</i></p> <p>Keller Ch. 44, 45</p>
April 9	Quantitative Analysis of Texts	Reading #2: Krippendorff (2004)
	Critical Reflections on Quantitative Research	Sliver ch. 1-6
April 16	Critical Reflections on Quantitative Research (continued)	<p>Silver ch. 7-13</p> <p>Reading #3: Hurley (2005)</p> <p>Reading #4: Gladwell (2010)</p>
April 23	Critical Reflections on Quantitative Research (continued)	Reading #5: Lehrer (2010)
	Final Project Discussions	
April 30	Final Project Presentations	Final Project Due: Friday, May 3rd @ 11:59 pm
May 8	<p>Final Exam Date – Wednesday, May 8th 4:30-7:00 pm</p> <p><i>No final exam is scheduled for this class...but keep this date available for any necessary make-up classes</i></p>	