Course Outline

PA 706: Research Methods and Data Analysis II

Course Objectives
1. To give students the tools to be intelligent consumers of statistical analyses results, processes and data.
2. To learn to conduct quantitative data analyses and to interpret the results.
3. To understand how to effectively use statistical software like SPSS to conduct statistical analyses.
4. In a project of one's own choosing, to complete a research project from beginning to end.

Required Books And Materials

Books
- Web-based “lectures” and videos on statistics topics, links available in our iLearn space

Articles—All on iLearn

• Rainie, Lee and Smith, Aaron. 2010. Politics Goes Mobile. Pew Research Center’s Internet and American Life Project. (On cross-tabulations)


Class materials
• Calculator and flash drive

Course Outline
1/26
Introduction to the Course
Review of Research Design and Measurement.
Discussion of PA 705 projects and their status.
BRING CALCULATOR TO EACH CLASS.

2 / 2
Content Analysis
Content Analysis
Finding Patterns in Data
Reporting Qualitative Patterns in Data
Reading To Prepare for Class: MBB, Ch.1, 3
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Ch.1
Lowi, 1972.

2 / 9
Variables, Measurement, Coding. Recoding, New Variables.
Preparing Data.
Data Collection.
Reading To Prepare for Class: MBB, Ch.2
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Chs. 2-5, App A & B
Benito and Bastida, 2009, pp. 403-408.

Due: MBB 3.1, 3.2, 3.3, 3.4
Percentages and Percent Change, Ratios and Rates
Frequency Distributions.
Reading To Prepare for Class: MBB, Ch.4.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Ch. 6.
Due: MBB 2.1 – 2.5, 2.9- 2.12 / Kirkpatrick and Feeney Ch. 2 enter data and name vars

Descriptive Statistics
Measures of Central Tendency
Measures of Variation and Dispersion
Reading To Prepare for Class: MBB, Chs. 5, 6.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Ch. 6.
Due: MBB 4.1-4.6, 4.8 / Kirkpatrick and Feeney Ch. 6 Sample Problem

Introduction to Probability.
Probability Distributions (normal, F, t, exponential)
Reading To Prepare for Class: MBB, Chs. 7, 8, 9.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Chs. 7-9.
Due: MBB 5.1-5.5, 6.1-6.4, 6.6, 6.7 / Kirkpatrick and Feeney Ch. 6 Sample Problem

Hypothesis Testing.
Tests of Significance
Chi-Square
T-tests
Z-scores and the normal distribution
Reading To Prepare for Class: MBB, Ch.11 - 14.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Chs. 7-9.
LeRoux, 2009
Morgeson and Mithas, 2009.
Due: MBB 7.1-7.5, 8.1-8.3, 9.1-9.4, 9.6

Hypothesis Testing: Contingency Table Analysis
Analyzing and interpreting data within tables
Measures of Association
Reading To Prepare for Class: MBB, Ch.15, 16.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Ch. 17.
Due: MBB 11.1-11.5, 12.1-12.3, 12.5, 13.1, 13.2, 14.1, 14.3, 14.4 / Kirkpatrick and Feeney Ch. 7 Sample Problem, Ch. 8 Sample Problem, Ch. 9 Sample Problem

More Contingency Tables
Using Control Variables in Tables.
Reading To Prepare for Class: MBB, Ch. 17.
Web-based lectures and / or video of topic
Due: MBB 15.1, 15.2, 15.5, 15.6, 16.1-16.3, 16.6 / Kirkpatrick and Feeney Ch. 17 Sample Problem
3 / 30  Spring Break

4 / 6  Correlation Analysis
Simple Regression Analysis
Regression Assumptions
Reading To Prepare for Class:  MBB, Chs. 18.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Ch. 10, 14 15
Benito and Bastida, 2009

Due: MBB 17.1, 17.3, 17.4, 17.5

4 / 13  Multiple Regression
Analysis of Variance
Reading To Prepare for Class:  MBB, Chs. 19, 21.
Web-based lectures and / or video of topic
Kirkpatrick and Feeney, Ch. 16
Walker and Brewer, 2008

Due: MBB 18.1, 18.3, 18.5 / Kirkpatrick and Feeney Ch. 15 Sample Problem

4 / 27  Multiple Regression—Output and Data Management.
More Assumptions and Violations of Assumptions.
Interrupted Time Series.
Communicating Findings.
Reading To Prepare for Class:  MBB, Chs. 23.
Web-based lectures and / or video of topic

Due: MBB 19.1-19.4, 21.1, 21.3, 21.4 / Kirkpatrick and Feeney Ch. 10 Sample Problem,
Ch. 16 Sample Problem

5 / 4  Poster Presentations.

5 / 11  Poster Presentations.

5 / 18  Final Examination.

Course Requirements:
45%  Paper (started in PA 705, completed in PA 706) (Includes presentation)
30%  Homework (3 % for each of 10 homework assignments)
25%  Final Exam
Each Night's Class Schedule (Tentative):

Before class:
1. Read assigned chapter material from MBB
2. Read through the web-based lectures and/or videos on the topic for the night (links available in iLearn)
3. Read assigned material from Kirkpatrick and Feeney
4. Read any assigned public administration article using the statistics technique of the evening

In class:
6 – 7 Work on Homework Due That Night—Students put problem solutions on board.
7 – 8 Lecture / Discussion on That Night’s Topic
8 – 9 Computer Lab Work (Lab Time – 8 pm – 8.45 pm)

Homework Assignments
1. HW 1: MBB 3.1, 3.2, 3.3, 3.4. Due 2/9
2. HW 2: MBB 2.1 – 2.5, 2.9- 2.12 / Kirkpatrick and Feeney Ch. 2 enter data and name vars Due 2/16
3. HW 3: MBB 4.1-4.6, 4.8 / Kirkpatrick and Feeney Ch. 6 Sample Problem Due 2/23
4. HW 4: MBB 5.1-5.5, 6.1-6.4, 6.6, 6.7 / Kirkpatrick and Feeney Ch. 6 Sample Problem Due 3/2
6. HW 6: MBB 11.1-11.5, 12.1-12.3, 12.5, 13.1, 13.2, 14.1, 14.3, 14.4 / Kirkpatrick and Feeney Ch. 7 Sample Problem, Ch. 8 Sample Problem, Ch. 9 Sample Problem Due 3/16
7. HW 7: MBB 15.1, 15.2, 15.5, 15.6, 16.1-16.3, 16.6 / Kirkpatrick and Feeney Ch. 17 Sample Problem Due 3/23
8. HW 8: MBB 17.1, 17.3, 17.4, 17.5 Due 4/6
9. HW 9: MBB 18.1, 18.3, 18.5 / Kirkpatrick and Feeney Ch. 15 Sample Problem Due 4/13
10. HW 10: MBB 19.1-19.4, 21.1, 21.3, 21.4 / Kirkpatrick and Feeney Ch. 10 Sample Problem, Ch. 16 Sample Problem Due 4/27

All Exercises are due the night indicated on the syllabus. All work must be shown. Narratives MUST be included that explain all results and findings—credit will not be given for work that is not interpreted. Students are encouraged to work together to solve problems but each student must submit separately. For Kirkpatrick and Feeney Sample Problems in each of their chapters, enter the data, go through the steps they describe in their text Step-by-Step so that you know how to run each type of analysis. The output from each sample problem must be submitted; on it you should highlight the results and handwrite your interpretation of the results. At the beginning of each night’s class, we will go over each of the problems and assignments in class and students will have the opportunity to write down the correct answer (in differently colored ink) before I grade them.
Schedule for Completing Research Paper

- Data Collection Period: January 26 – March 30
- Data Analysis: March 31 – April 20
- Write Paper: April 20 – May 3
- All papers must be submitted: May 4
- Poster Presentations: May 4 and May 11—assignments to be determined randomly

Course Policies

- University regulations specify that 2-3 hours of work out of class for every hour in class.
- No incompletes will be granted in this class. The format that works best for this class makes it difficult to grant incompletes.
- All assignments must be turned in on time (no later than 9 pm on due date). Assignments not turned in the class period in which they are due will have grades lowered by 10%. If assignment is not turned in at the next class, the grade will be zero.
- No email submissions. Students are responsible for ensuring that an assignment has been submitted directly to the instructor.
- Plagiarism and lack of citations on any assignment will be cause for an automatic grade of 0 on any assignment.
- No assignments may be submitted via email, only hard copy will be accepted.
- Class attendance is critical.
- Cell phones must be turned off during class.

Academic Misconduct

Cheating and plagiarism are contrary to the mission of the university and are never tolerated. Students who display inappropriate conduct, including cheating and plagiarism, may be subject to disciplinary action as provided in Title 5, California Code of Regulations. Any student may be expelled, suspended, placed on probation, or given a lesser sanction for discipline problems. The Student Discipline Officer, housed in the Dean of Students Office, is responsible for administering the Student Disciplinary Procedures for the California State University and should be contacted for further information.