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Fall 2017  
Office Hours:  
M, Th 4:30-5:45

## PA 706: Research Methods and Data Analysis II Course Syllabus

### Course Objectives

At the end of the course, students will be able to:

1. Be an intelligent consumer of statistical analyses results, processes and data.
2. Effectively explore data and to recognize patterns in data.
3. Analyze appropriate qualitative or quantitative data and to interpret the results.
4. Be able to use software tools like Excel, SPSS, and Tableau in their process of understanding data.
5. Communicate research results effectively.
6. Carry out a research project from beginning to end.

### Required Books And Materials

- Berinato, Scott. 2016. *Good Charts: The HBR Guide to Making Smarter, More Persuasive Data Visualisations*. Harvard Business Review Press. ISBN-10: 1633690709 ISBN-13: 978-1633690707 (\$20.05)
- Meier, Kenneth J.; Brudney, Jeffrey L; and Bohte, John. 2011. Applied Statistics for Public and Nonprofit Administration. 8th Edition Wadsworth. ISBN-10: 1111342806 ISBN-13: 9781111342807
- SPSS Student Version.
- Tableau Student Version (Instructor will provide link to downloading free copy, good for one year)
- Excel.
- Laptop and calculator are musts for each class.

### Each Night's FLIPPED Class Schedule (Tentative):

Prior to Class	Watch Assigned Videos (links available in iLearn). THIS IS CRUCIAL.
6 — 7	Supplemental Lecture on Topic
7-7:30	SPSS and Tableau demonstration
7:45-8:45	Students work together on homework

Students are expected to attend class during Workshop sessions and to work on their papers and / or homework.

**Course Outline (for Wednesday class)**

<b>Date</b>	<b>Topic</b>	<b>Required for Class / Must Read Before Class</b>
8/24	<ul style="list-style-type: none"> <li>• Introduction to the Course.</li> <li>• Review of Student Projects to Date</li> </ul>	<ul style="list-style-type: none"> <li>• Emailed and hard copy submission of PA 705 project.</li> <li>• Prepared to discuss 705 project and state of data collection.</li> </ul>
8/31	<ul style="list-style-type: none"> <li>• Collecting Data</li> <li>• Data Management Tools</li> <li>• Tableau / Excel.</li> </ul>	<ul style="list-style-type: none"> <li>• All data collected must be brought to this class</li> <li>• Berinato, Chs. 1 — 3 .</li> </ul>
9/7	<ul style="list-style-type: none"> <li>• Finding &amp; Exploring Patterns in Data</li> <li>• Graphs / Communicating Research Results</li> <li>• Tableau / Excel</li> </ul>	<ul style="list-style-type: none"> <li>• Berinato, Chs. 4 - 6 .</li> <li>• Meier, Brudney, and Bohte, Chs. 1, 3.</li> </ul>
9/14	<p><b>Student Project Data Entry Workshop: Data Entry into SPSS / Qualitative Data Entry</b></p> <ul style="list-style-type: none"> <li>• Content Analysis</li> <li>• Finding Patterns in Qualitative Data</li> <li>• Reporting Qualitative Patterns in Data</li> </ul>	<ul style="list-style-type: none"> <li>• Laptop, Excel, and SPSS must be brought to this class. All data must be collected must be brought to this class, to be entered during class.</li> </ul>
9/21	<ul style="list-style-type: none"> <li>• Measurement</li> <li>• Percentages / Percentage Change / Ratios</li> <li>• Pivot Tables</li> <li>• More Graphing</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Finding a Percentage and Decimal</li> </ul> </li> <li>• <b>Student Project Data Collection and Entry Assignment DUE.</b></li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Berinato, Chs. 7, 8.</li> <li>• Meier, Brudney, and Bohte, Chs. 2</li> <li>• Will do homework problems in class</li> </ul>

9/28	<ul style="list-style-type: none"> <li>• Frequency Distributions</li> <li>• More Graphs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Shapes of Distributions</li> <li>o Khan Academy Examples Analyzing Clusters, Gaps, Peaks, and Outliers for Distributions</li> <li>o Khan Academy Box and Whisker Plot</li> <li>o Khan Academy Comparing Dot Plots, Histograms and Box Plots</li> </ul> </li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Berinato, Ch. 9, Conclusion.</li> <li>• Meier, Brudney, and Bohte, Ch. 4</li> <li>• Will do homework problems in class</li> </ul>
10/5	<ul style="list-style-type: none"> <li>• Descriptive Statistics</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Statistics Intro: Mean, Median, and Mode</li> <li>o Khan Academy Range, Variance, and Standard Deviation</li> <li>o Khan Academy Range and Mid-Range</li> </ul> </li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Meier, Brudney, and Bohte, Ch. 5, 6</li> <li>• Will do homework problems in class</li> </ul>
10/12	<p><b>Student Project Descriptive Statistics Workshop: Analyzing Data with SPSS</b></p>	<ul style="list-style-type: none"> <li>• Laptop, completed datafiles, and SPSS must be brought to this class.</li> </ul>
10/19	<ul style="list-style-type: none"> <li>• Probability</li> <li>• Qualitative Data Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Probability Part 1, 2, 3, 4, 5, 6, 7</li> </ul> </li> <li>• <b>Student Project Descriptive Statistics Analysis Assignment DUE.</b></li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Meier, Brudney, and Bohte, Ch. 7-9</li> <li>• Will do homework problems in class</li> </ul>
10/26	<ul style="list-style-type: none"> <li>• Inferential Statistics and Hypothesis Testing</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Intro to Normal Distribution</li> <li>o Khan Academy Central Limit Theorem</li> <li>o Khan Academy Idea Behind Hypothesis Testing</li> <li>o Khan Academy Hypothesis Testing &amp; p-values</li> <li>o Khan Academy Simple Hypothesis Testing</li> </ul> </li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Meier, Brudney, and Bohte, Ch. 10, 11</li> <li>• Will do homework problems in class</li> </ul>

9/2	<b>No Class: Project Work Day</b>	
11/9	<ul style="list-style-type: none"> <li>• Difference Between Groups: T-tests and ANOVA</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Z-Statistics vs. T-Statistics</li> <li>o Khan Academy T-Statistic Confidence Interval</li> <li>o Khan Academy One-Tailed and Two-Tailed Tests</li> </ul> </li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Meier, Brudney, and Bohte, Ch. 12, 13</li> <li>• Will do homework problems in class</li> </ul>
11/16	<ul style="list-style-type: none"> <li>• Contingency Tables</li> <li>• Contingency Tables with table statistics</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Two-Way Relative Frequency Tables</li> <li>o Khan Academy Interpreting Two-Way Tables</li> <li>o Khan Academy Contingency Table Chi-Square</li> </ul> </li> <li>• <b>Student Project Data Analysis Assignment DUE.</b></li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Will do homework problems in class</li> <li>• Meier, Brudney, and Bohte, Ch. 14-16</li> <li>• Will do homework problems in class</li> </ul>
11/23	<b>No Class: Thanksgiving Week</b>	
11/30	<ul style="list-style-type: none"> <li>• Introduction to Regression Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Correlation and Causality</li> <li>o Khan Academy Regression Line Example</li> <li>o Khan Academy Constructing a Scatter Plot</li> <li>o Khan Academy R-Squared of Coefficient of Determination</li> <li>o Khan Academy Regression</li> </ul> </li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Meier, Brudney, and Bohte, Ch. 17, 18</li> <li>• Will do homework problems in class</li> </ul>
12/7	<ul style="list-style-type: none"> <li>• Advanced Regression Analysis with Assumptions of Regression</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch prior to class:</b> <ul style="list-style-type: none"> <li>o Khan Academy Fitting a Line to Data</li> <li>o Khan Academy Introduction to Residuals and Least Squares Regression</li> <li>o Khan Academy Impact of Removing Outliers</li> <li>o Khan Academy R-Squared of Coefficient of Determination</li> </ul> </li> <li>• Laptop with SPSS must be brought to this class</li> <li>• Meier, Brudney, and Bohte, Ch. 20, 21</li> <li>• Will do homework problems in class</li> </ul>
12/14	<b>Poster Session</b>	

**Course Requirements:**

<b>Assignments</b>	<b>Brief Explanation (further details in iLearn)</b>	<b>%of Total Grade</b>
<b>705/706 Project</b>	Assignments scaffold (build) into final paper and poster.	
a. Data Collection & Entry	To be incorporated into final paper. Will be reviewed and comments will be made. Will not be graded UNLESS assignment is not submitted. Then, points will be deducted from Final Paper.	
b. Descriptive Statistics	Results of Descriptive Statistics to be incorporated into final paper. Will be reviewed and comments will be made. Will not be graded UNLESS assignment is not submitted. Then, points will be deducted from Final Paper.	
c. Data Analysis	Results of Data Analysis to be incorporated into final paper. Will be reviewed and comments will be made. Will not be graded UNLESS assignment is not submitted. Then, points will be deducted from Final Paper.	
d. Paper—Final		50%
e. Poster—Final		10%
<b>Homework</b>	Will be completed in class and in small groups. Points will automatically be received for each homework UNLESS student does not work on assignment or does not attend that class. If student does not then make up homework ON THEIR OWN, points will be deducted from Homework points (5 of 15 percentage points for each missed assignment). Once initial 15 points are gone (after 3 missed assignments, points will be deducted from Final Paper).	15%
<b>Take Home Final Exam</b> (Qualitative and Quantitative)		25%

**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 10 pm on due date). Points will be deducted for any and all exceptions. 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. Any absences in excess of 2 will result in 5 points deducted from final project grade per each occurrence.
- 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.

*AS OF August 1, 2017*  
***THIS INFORMATION IS SUBJECT TO CHANGE***  
College of Health & Social Sciences

**Fall 2017**

**From: Dean Alvin Alvarez and Associate Dean John Elia**

### **CHSS Policy**

*Syllabi are to incorporate the Academic Senate Policy regarding finals week, the deadlines or withdrawals, late adds, CR/NC option and information related to course registration and Disability Programs and Resource Center. A sample listing of the required College policies are shown below:*

Welcome to the College of Health & Social Sciences,

This section is to inform you of the College and University policies that may affect you. Knowledge of these deadlines (viewed at <http://registrar.sfsu.edu/>) and policies will help you to navigate the bureaucracy of the University while helping you succeed and graduate in a timely manner. Policies can be intimidating sometimes, but they ensure an equitable, consistent and reliable process for each student. Please review this information and refer to <http://chss.sfsu.edu/content/petitions-information> for more detail on these policies. Approval of a petition from the instructor and/or Department Chair does not constitute automatic approval from the Associate Dean so please continue attending class until a decision is made. If you have any questions about how these policies specifically apply to your situation, please contact the Associate Dean's Office at [assocdean@sfsu.edu](mailto:assocdean@sfsu.edu) or in HSS 239.

### **When is the deadline to drop a class?**

The last day to drop a class without a W grade is September 13, 2017 by 11:59 PM.

### **What if I wish to withdraw from a course after the drop deadline?**

Withdrawal from a course is allowed from September 14, 2017 until November 17, 2017 only if you have **serious and compelling reasons with current, relevant supporting documentation**. The following are examples of **non-serious and non-compelling reasons** and would be denied:

- Changing major
- Poor academic performance in class
- Course no longer needed
- Missing pre-requisite(s)
- Instructor forgot to drop
- More time needed for other classes

Unexpected changes in work schedule or serious accident, protracted illness, or family emergencies may be considered serious and compelling if appropriate supporting documentation is attached. The petition must be submitted within a reasonable timeframe (e.g., within 2 weeks of an illness or change in work hours) and must include your unofficial transcripts. From November 18, 2017 until December 12, 2017, you may not withdraw from a class or the University, except only in the case of a **documented** serious illness or verified accident.

Withdrawals cannot be initiated electronically and must be submitted using a paper application. A maximum of 18 units can be withdrawn, and a course can only be repeated once with a failing grade.

### **How do I take a course for Credit or No Credit 1CR/NC1 Grade?**

Please check the course description in the Bulletin to determine if the class can be taken CR/NC. If it is permitted, then you may change your grading option via your SF State Gateway until October 18, 2017 by 11:59 PM. The Associate Dean will not approve requests for changes if you miss this deadline.

### **What if I want to add a class after registration closes?**

The period to add classes via permission numbers is August 23, 2017 through September 13, 2017 until 11:59 PM. It is your responsibility to obtain a late permission number from your instructor and add the class. Faculty cannot add you into a class. Starting September 14, 2017, a Waiver of College Regulations form must be submitted. This will only be approved if there was an administrative error.

### **How do I know if any changes in my registration went through?**

Always check your registration on your SF State Gateway after making any changes and before deadlines to ensure you are registered properly for your classes. It is always your responsibility to ensure your schedule is correct, even if the instructor indicates they will drop you. All deadlines will be strictly adhered to by the instructor, the Department Chair, and the CHSS Associate Dean.

### **When are finals?**

According to Academic Senate policy F76-12 a time period is set aside at the end of each semester for a formal examination period. All classes are expected to meet during the final examination period whether an examination is given or not. The final examination schedule is:

[http://www.sfsu.edu/~acadres/final\\_exams/finalf17.htm](http://www.sfsu.edu/~acadres/final_exams/finalf17.htm)

### **What resources are available to me on campus?**

**Disability Programs and Resource Center:** Students with disabilities who need reasonable accommodations are encouraged to contact the instructor. The Disability Programs and Resource Center (DPRC) is available to facilitate the reasonable accommodations process. The DPRC, located in SSB 110, can be reached by telephone at 415-338-2472 (voice/TTY) or by e-mail at [dprc@sfsu.edu](mailto:dprc@sfsu.edu).

**Student Disclosures of Sexual Violence:** SF State fosters a campus free of sexual violence including sexual harassment, domestic violence, dating violence, stalking, and/or any form of sex or gender discrimination. If you disclose a personal experience as an SF State student, the course instructor is required to notify the Dean of Students. To disclose any such violence confidentially, contact:

**The SAFE Place** - (415) 338-2208; [http://www.sfsu.edu/~safe\\_plc/](http://www.sfsu.edu/~safe_plc/)

**Counseling and Psychological Services Center** - (415) 338-2208; <http://psyservs.sfsu.edu/>

For more information on your rights and available resources: <http://titleix.sfsu.edu>

**CHSS Student Resource Center (HSS 254):** Provides academic advising and support to all students with a CHSS major. For more information and to book advising appointment:

<http://chss.sfsu.edu/src> or call (415) 405-3740.

**Undergraduate Advising Center (ADM 212):** Provides academic advising and support to all students. For more information: <https://advising.sfsu.edu/>