Westminster College
Department of Political Science
& Sociology
Office: Watto Faculty Commons
Spring 2012

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Office Hours: M 10:30 am – 11:30 pm
W 10:30 am – 11:30 am,
3:00 pm – 4:00 pm
& by appointment

Data Analysis

SSC252 M-W-F 8:10 – 9:10, HSC 290
4 credits M-W-F 9:20 – 10:20, HSC 290

This class will introduce you to the basics of statistical analysis. It will enable you to design and carry out research projects involving quantitative data, and will improve your ability to read scholarly journal articles written in the social sciences. The course teaches the basics of data collection, hypothesis development and testing as well as introduces students to some more advanced forms of statistical analysis. The course has a strong "lab" component built into it which will provide students with extensive practice using the skills necessary to carry out quantitative analysis.

Learning Objectives:

1. Develop a critical attitude toward answers provided by quantitative research
2. Know how to produce and interpret basic statistics
3. Master basic techniques of data presentation in the form of charts, graphs and tables
4. Be able to put a problem in quantitative form and answer it
5. Be able to describe the relationship between independent and dependent variables
6. Have experience collecting and using quantitative data to address a social science hypothesis

Required Readings:

Pollock, Phillip. 2005. *The Essentials of Political Analysis* 4th ed., Washington D.C.: Congressional Quarterly Press.

Pollock , Phillip. 2005. *An SPSS Companion to Political Analysis* 4th ed., Washington D.C.: Congressional Quarterly Press.

Additional course readings will be available through My.Westminster. Students should familiarize themselves with the course pages on My.Westminster as soon as possible.

Expectations:

Attendance/ Quizzes & Class Participation

It is the students' responsibility to remain informed about all class activities. Students are expected to attend classes on a regular basis, and keep up with all readings. ***Assigned readings should be completed by the class indicated on the syllabus.*** Students are expected to participate in class discussions, so it is very important that the readings are completed on time.

Though daily attendance will not be taken the instructor will give unannounced quizzes at various times throughout the semester. ***Normally no make up work will be given for these quizzes***. Students facing exceptional circumstances that make attendance impossible should consult with the instructor as soon as possible. Students who have a valid excuse and ***inform the instructor of their absence before the class occurs*** can make arrangements to make up missed quizzes.

Quizzes may cover any material from the lectures or readings. Quiz scores will constitute 1/2 of the Participation/Quiz component of the final grade. The lowest quiz score will be dropped when final grades are calculated.

Participation points earned in class will constitute the other 1/2 of the Participation/Quiz component of a student's final grade. At the end of the term students will be assigned a participation score based on the number of classes in which they participated. Most classes will follow a lecture/discussion format. The average raw participation score will constitute an 85%; the top score will equal a 100%. The other raw scores will be translated into participation points based on their distance from this average.

Problems and Homework

Students will be given exercises and homework assignments on a regular basis. Many of these assignments will be collected and graded. Completing these assignments in a timely manner will provide students with critical practice using the techniques and concepts being covered in class. Such assignments should always be turned in on time. Students will be penalized one point per day (not per class) for late work. ***Students who miss class are responsible for finding out and completing the assignments on time.*** No homework assignments will be accepted after the last day of class.

Students are required to complete these assignments in duplicate (two copies) one copy will be handed in to the instructor and one copy will be kept by the student for class.

Exams

Three exams will be given during the course of the semester. A final exam will be given at the end of the course. The final exam is cumulative.

Data Project

Students will be expected to complete a data project. This assignment may be completed either individually or as part of a group of no more than 3 students. Students who form groups will be responsible for working together. Once formed the group may not split up. The instructor does reserve the right to assign different grades to group members, but will only do so in situations where, in his judgment, it can be demonstrated that there has been an imbalance in the work done by each member. More information about the details of this project will be provided during the semester.

Academic Integrity:

This course is covered by all College policies on academic integrity. No forms of academic dishonesty, including plagiarism, will be tolerated. The instructor will insist as a ***minimum punishment*** that ***students determined to have cheated on any exam or assignment receive an "F" in the course***. Be advised that more serious actions may be taken by the administration, as the instructor will report all instances of academic dishonesty to the appropriate college officials and will vigorously pursue all such cases though the College disciplinary procedures.

Grading:

Course grades will be calculated according to the following formula.

Participation & quizzes	10%
Homework Assignments	20%
Exam #1	10%
Exam #2	10%
Exam #3	10%
Data Project	20%
Final Exam	20%

+/- Grades will be issued

The overall weighted % corresponds to the following Final grades;

93% and up=A	77-79% = C+
90-92% = A-	73-76% = C
87-89% = B+	70-72% = C-
83-86% = B	67-69% = D+
80-82% = B-	63-66% = D
	60-62% = D-
	59% & less = F

Topics and Course Readings for Data Analysis

W	Jan 18	Introduction to Data Analysis
F	Jan 20	The Scientific Method; and Introduction to SPSS Readings: Textbook: Introduction SPSS Companion: Getting Started, Chapter 1
M	Jan 23	Defining and Measuring Concepts Readings: Textbook: Ch 1
W	Jan 25	Measuring Exercises Readings: Cao Reading (***see My.Westminster***)
F	Jan 27	Video: Measurement
M	Jan 30	Analyzing the State of undergraduate research methods training Readings: Theis and Hogan (***see My.Westminster***)
W	Feb 1	Variables Readings: Textbook Ch 2
F	Feb 3	Variables, cont.
M	Feb 6	Descriptive Statistics Readings: SPSS Companion: Ch 2
W	Feb 8	Descriptive Statistics, Practice
F	Feb 10	Collecting and Coding Data Readings: SPSS Companion: Ch 11
M	Feb 13	What is out there?/ Data Continued Readings: SPSS Companion Ch 3
W	Feb 15	Hypotheses Readings: Textbook Ch 3
F	Feb 17	Lab Day with T.A.—Projects!
M	Feb 20	Hypotheses continued/ Thinking about your projects

W	Feb 22	Review for first exam
F	Feb 24	**First Exam**
M	Feb 27	Research Design and the Logic of Control Readings: Textbook Ch 4
W	Feb 29	Sampling and Inference Readings: Textbook Ch 6 SPSS Companion Ch. 6 **Data Project Proposals Due**
F	Mar 2	Sampling cont.
March 3rd- 11th		***Spring Break, No Class Meetings***
M	Mar 12	Logic of Comparisions Readings: Textbook Ch 5
W	Mar 14	Making Comparisons Readings: SPSS Companion Ch. 4
F	Mar 16	Comparisons continued
M	Mar 19	Lab Day: Working with Your Data **(You will need to bring your project data with you!)**
W	Mar 21	Making Controlled Comparisons Readings: SPSS Companion Ch 5
F	Mar 23	Discussion of Inference Readings: Clinton, Jackman and Rivers "The Most Liberal Senator? ***(see my.westminster)***
M	Mar 26	Statistical Significance Readings: Textbook Ch 7
W	Mar 28	Review for Second Exam
F	Mar 30	**Second Exam**
M	Apr 2	***No class meeting***
W	Apr 4	Lab Day: Working with your data **(You will need to bring your project data with you!)**

Easter Break, April 6th through 9th, no class meetings

T	Apr 10	Analyzing Ordinal and Nominal Relationships Readings: SPSS Companion Ch 7
W	Apr 11	Understanding Regression Readings: Textbook Ch 8
F	Apr 13	Understanding Regression cont.
M	Apr 16	Using Regression Readings: SPSS Companion Ch 8
W	Apr 18	Lab Day: Working with your data **(You will need to bring your project data with you!)**
F	Apr 20	Multiple Regression
M	Apr 23	Dummy Variables & Interaction effects Readings: SPSS Companion Ch 9
W	Apr 25	Dummy Variable Regression continued./ Lab Day: Working with Data **(You will need to bring your project data with you!)**
F	Apr 27	Review for Third Exam
M	Apr 30	**Third Exam**
W	May 2	Logistic Regression (analyzing bi-nary dependent variables) Readings: Textbook Ch 9, SPSS Companion Ch 9
F	May 4	Review for Final Exam **Data Projects Due**

Final Exam T.B.A.