

Research Methods & Statistics - Spring 2015
PS 5002 Sec. 101 MW 3:30 - 4:45 PM, Rooms: BH 111, ED 215

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Course Description: We examine the application of quantitative methods to political science research in this course. We hope to achieve three separate goals by the end of the semester. First, we want to prepare students to pursue their own research projects using statistics as a means to test hypotheses. Second, we hope to provide students with a sufficient foundation in quantitative methods to prepare them to learn more advanced statistical techniques should they be so inclined. Third, we hope to equip students with the tools necessary to evaluate the merits of existing research using statistical techniques. We will split our weekly meetings in this class, spending Mondays in the classroom and Wednesdays in the lab. By doing so, we provide students with weekly examples of how to analyze “real-world” data on their own.

Textbooks:

- Salkind, Neil J. 2016. *Excel Statistics: A Quick Guide. Third Edition.* Thousand Oaks, CA: Sage Press.
- Kellstedt, Paul and Guy Whitten. 2013. *The Fundamentals of Political Science Research. Second Edition.* Cambridge: Cambridge University Press.

Course Grades

<i>Grading Scale</i>		<i>Grade Requirements</i>			
A+	100	C+	77-79	Participation	10 %
A	93-99	C	73-76	Assignments	60 %
A-	90-92	C-	70-72	Final Exam	30 %
B+	87-89	D+	67-69		
B	83-86	D	63-66		
B-	80-82	D-	60-62		
		F	0-59		

- Participation
 - Students are expected to attend all classes, read all assigned materials, and contribute to class discussions. Each student’s participation grade will be based on his or her fulfillment of these tasks.

- Absences will negatively affect a student’s overall grade.
- Assignments
 - Students are obligated to complete an assignment each week. These weekly assignments will be discussed further in class.
- Exam
 - This course will conclude with a take home, comprehensive exam. More details will be provided in class.

Course Outline:*

Week 1	Introduction
Week 2	Review of research design
Week 3	Variables, central tendency & variability
Week 4	Probability and statistical inference
Week 5	Making comparisons & hypothesis testing I
Week 6	Making comparisons & hypothesis testing II
Week 7	Bivariate Regression
Week 8	Multiple regression I: basics
Week 9	Spring Break
Week 10	Multiple regression II: dummy variables
Week 11	Multiple regression III: interaction effects
Week 12	Multiple regression IV: nonlinear effects
Week 13	Multiple regression V: assumptions & diagnostics
Week 14	Binary choice dependent variables
Week 15	Being careful with time
Week 16	Special Topics

Specific Course Outline:

Week 1. Introduction

January 11 & 13 Kellstedt & Whitten, Chs. 1 & 2

Week 2. Review of Research Design (No Class on January 18 due to MLK Day)

January 20 Kellstedt & Whitten, Chs. 3 & 4

Week 3. Variables, central tendency & variability

*Dates and topics are subject to change at instructor’s discretion.

January 25 & 27 Kellstedt & Whitten, Ch. 5;
Salkind, QuickGuides 1-11, 41, 55

Week 4. Probability and statistical inference

February 1 & 3 Kellstedt & Whitten, Ch. 6;
Salkind, QuickGuides 11-17, 29, 45

Week 5. Making comparisons & hypothesis testing I

February 8 & 10 Kellstedt & Whitten, Ch. 7;
Pollock, Chs. 4, 6, 7

Week 6. Making comparisons & hypothesis testing II

February 15 & 17 Kellstedt & Whitten, Ch. 7;
Salkind, QuickGuides 19, 20, 27, 46-49, 53

Week 7. Bivariate Regression

February 22 & 24 Kellstedt & Whitten, Ch. 8;
McClendon, Ch. 2
Pollock, p. 131-136

Week 8. Multiple regression I: basics

February 29 & March 2 Kellstedt & Whitten, Ch. 9;
McClendon, Ch. 3;
Salkind, QuickGuides 54

Week 9. SPRING BREAK

March 7 & 9 NO CLASS

Week 10. Multiple regression II: dummy variables

March 14 & 16 Kellstedt & Whitten, p. 220-229;
McClendon, Ch. 5;
Pollock, p. 149-154

Week 11. Multiple regression III: interaction effects

March 21 & 23 Kellstedt & Whitten, p. 229-232;
McClendon, Ch. 7;
Pollock, p. 154-160

Week 12. Multiple regression IV: nonlinear effects (**No Class on March 28**)

March 30 McClendon, Ch. 6

Week 13. Multiple regression V: assumptions & diagnostics

April 4 & 6 Berry, *Understanding Regression Assumptions*

Week 14. Binary choice dependent variables

April 11 & 13 Kellstedt & Whitten, p. 247-255;
Long, Ch. 3
Pollock, Ch. 10

Week 15. Being careful with time

April 18 & 20 Wooldridge, Ch. 10 & 11

Week 16. Special Topics

April 25 & 27 X

Week 17. Review

Academic Integrity: As a community of learners at Appalachian State University, we must create an atmosphere of honesty, fairness, and responsibility, without which we cannot earn the trust and respect of each other. Furthermore, we recognize that academic dishonesty detracts from the value of an Appalachian degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form and will oppose any instance of academic dishonesty. This course will follow the provisions of the Academic Integrity Code, which can be found on the Office of Student Conduct Web Site:

www.studentconduct.appstate.edu.

Disability Services: Appalachian State University is committed to making reasonable accommodations for individuals with documented qualifying disabilities in accordance with the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Those seeking accommodations based on a substantially limiting disability must contact and register with The Office of Disability Services (ODS) at [http://www.ods.appstate.edu/](http://www.ods.appstate.edu) or 828-262-3056. Once registration is complete, individuals will meet with ODS staff to discuss eligibility and appropriate accommodations.

Religious Observances Policy: Faculty members are required to make reasonable accommodations for students requesting to miss class due to the observance of religious holidays. All ASU students are allowed a minimum of two absences per year for religious observances. Up to two absences for such observances will be excused, without penalty to the student, provided that the student has informed the instructor in the manner specified in the syllabus. Notice must be given by the student to the instructor before the absence occurs and no later than three weeks after the start of the semester in which the absence(s) will occur. Arrangements will be made to make up work missed by these religious observances, without penalty to the student. For the purposes of this policy, ASU defines the term “religious observance” to include religious holidays, holy days, or similar observances associated with a student’s faith that require absence from class. Faculty, at their discretion, may include class attendance as a criterion in determining a student’s final grade in the course. On the first day of class, faculty must inform students of their class attendance policy and the effect of that policy on their final grade; both policies must be clearly stated in the class syllabus.