COURSE DESCRIPTION: This course is designed to acquaint students with research methods used by social scientists. Students will study terms and concepts used in research (e.g., theories, null and alternative hypotheses, independent and dependent variables, validity, reliability, generalizability), research design (including experimental and quasi-experimental designs, non-experimental designs, and sampling). Students will be introduced to basic statistical techniques for analyzing data and the interpretation of coefficients and statistical tests (frequency distributions, measures of central tendency, measures of association, spurious correlation, regression, confidence intervals and tests of significance). Students will learn to use SPSS (Statistical Package for the Social Sciences) to do analyses of data collected about political attitudes.

COURSE REQUIREMENTS: Your FINAL AVERAGE in this course is based on:

A. (20%) 1 Midterm Examination
B. (20%) 5 Top grades for Homework assignments 1-8
C. (20%) 5 Top grades for Homework assignments 9-16
D. (40%) FINAL EXAMINATION

All exam grades and final grades will be graded on the curve (normal distribution for the class). ! grade on improvement during the course.

Make up homeworks will NOT be given. LATE ASSIGNMENTS WILL NOT BE ACCEPTED without a written excuse!


LECTURE NOTES: The lecture notes, data, readings, calendar, and homework assignments will be available on the following CLASS WEB PAGE: http://web.ics.purdue.edu/~parker5/ (select POL300 AND POL300 SPRING 2015)

OTHER REQUIREMENTS:

A. ATTENDANCE: Much of the material in this class is transmitted in the lectures and the readings. Therefore, attendance in this class is mandatory and roll will be taken. If you have more than four (4) unexcused absences, I reserve the right to lower your final grade one-letter grade.

B. READINGS: In addition to the required book, there are readings online on the course web page. The articles will be discussed in class; therefore, it is required that the readings listed with each class period be read in preparation for that class period.

C. HOMEWORKS: 16 homework assignments will be given during the semester and provide students with a way of evaluating their mastery of each area on the syllabus. The homework assignments are designed to demonstrate important concepts being covered in the class and give the student practice working with the concept. They are also designed to help the student practice what is being learned on typical articles assigned for other classes. Only the highest 5 homework scores in each half of the semester will be counted in determining the grade for homework. (Top 4 scores for Homeworks 1-8 plus the score for Homework 8 which is mandatory, and the top 5 scores for Homeworks 9-16.) Homework 8 is mandatory and cannot be dropped.

NOTE: In order to learn the material in this course, it is STRONGLY recommended that you do ALL of the homework assignments.

(See calendar on web page for due dates for assignments.)

MIDTERM EXAMINATION: MONDAY MARCH 2
MANDATORY HOMEWORK 8 due:
FINAL EXAM—requires you to interpret different types of tables and statistical coefficients
SYLLABUS

WEEK 1—JAN. 12–16
I. The Scientific Method in Political Science
   A. Introduction to the course
   B. Why and how do we use the “scientific method” to study Political Science?

   Baker, Doing Social Research, Chapter 1, “Varieties of Social Research”, and

   Friday Lab: Resources for building bibliographies—Library of Congress and JSTOR
   HOMEWORK 1: Constructing a bibliography, and using research resources on the
   internet (JSTOR, Library of Congress, Web of Science’s Social Science Citation Index,
   Google Scholar, Google Books, etc.) DUE: JAN 23

WEEK 2—JAN. 19–23
   JAN. 19—NO CLASS MARTIN LUTHER KING HOLIDAY
II. The Design of Research Projects in Political Science—Research Design
   A. How do political scientists design their research projects, and why do they
      do it that way?
      1. Elements of Research (questions, theories, hypotheses, variables
         and relationships)
      2. Literature review and library research

   and Chapter 3, “Defining, Designing and Developing a Research Project”.
   HOMEWORK 1: DUE: JAN 23

WEEK 3—JAN. 26–30
   B. Framing the research question and formulating explanations
   C. Research designs
      1. Experimental designs
      2. Quasi-experimental designs

   Baker, Chapter 6, “Experimental Research”.
   Nachmiyas-Nachmiyas, Research Methods in the Social Sciences, Chapter 5
   Research Designs and Experiments. See class web page READINGS.
   Iyengar, Shanto, Mark Peters, and Donald Kinder. 1982. "Experimental
   Demonstration of the 'Not-so-minimal' Effects of Television News
   Programs." American Political Science Review. 76: 848-858.
   See also class web page READINGS: Milgram experiment and Campbell and
   Stanley reading
   Friday Lab: Hypotheses, levels of analysis, and variables in research

WEEK 4—FEB. 2–6
   3. Nonexperimental designs
   4. How to choose the “appropriate” design(s)
   5. How to evaluate an experimental research design—Iyengar, et al.

   HOMEWORK 2 DUE: FEB 2
   Friday Lab: The design of an SPSS dataset, and introduction to the data used in class.
   Finding datasets online—ICPSR and Roper—and finding public opinion polling
   data online (The Polling Report, PEW)
   HOMEWORK 2: Critique of an Experimental Design DUE: FEB 2
II. OPERATIONALIZING THE RESEARCH DESIGN—How do we translate theories into a testable research project?

A. Conceptualization and Measurement
   1. Conceptualizing and justifying variables
   2. Measurement of concepts
   3. Reliability and Validity
   Baker, Chapter 4, "Operationalization and Measurement: From Concepts to Variables".

Friday Lab: Introduction to SPSS—Data/Variable, Syntax, and Output windows

HOMEWORK 3: Design an experiment, and a SPSS exercise. DUE: FEB 6

WEEK 6—FEB. 16--20

B. Characteristics of variables
   1. Exhaustive categories
   2. Mutual exclusivity
   3. Missing data—how to handle it

C. Variables in survey research—using survey questions as variables
   Friday Lab: Using SPSS to construct variables—the compute and recode commands, missing values, and labeling variables and values

HOMEWORK 4: Developing hypotheses and variables. DUE: FEB 18

WEEK 7—FEB. 23--28

III. METHODS OF COLLECTING DATA TO TEST HYPOTHESES--SURVEY RESEARCH

A. Sources of Data
B. Field Research, Participant Observation, Case Studies
C. Survey Research —Roper, ICPSR, PEW, GSS

   Baker, Chapter 7, Survey Research, Interviewing Techniques, and Focus Groups".
   Baker, Chapter 5, "Sampling".

Friday Lab: Using SPSS to construct variable—compute, count, if and missing values commands

HOMEWORK 5: Using SPSS to construct variables: The compute and recode commands. DUE: FEB 27

WEEK 8—MARCH 2--6

MIDTERM EXAMINATION: MON., MARCH 2

Friday Lab: Using frequencies to check new variables, and to describe populations, and creating confidence intervals

HOMEWORK 6: Using SPSS to construct variables: The compute, count, if, and missing values commands. DUE: MARCH 6

WEEK 9— MARCH 9–13

D. Populations and Sampling
   1. Defining populations
   2. Selecting samples
   3. Evaluating samples—random versus systematic error
   4. Confidence intervals
   5. Sampling distributions and sampling error

Friday Lab: Running summary measures in SPSS, comparison of means, medians

HOMEWORK 7: The frequencies command in SPSS, and creating confidence intervals
DUE: MARCH 13
WEEK 10—MARCH 16–20  SPRING BREAK

WEEK 11—MARCH 23–27
MANDATORY HOMEWORK 8 is due WED.

IV. DATA ANALYSIS
A. Univariate analysis--describing populations
   1. Measures of central tendency (mean, median, mode)
   2. Measuring variation in populations
   3. Describing distributions—frequencies and graphs


Friday Lab: Summary measures in SPSS—mean, median, mode, standard deviation

HOMEWORK 8: REQUIRED OF ALL STUDENTS (cannot be dropped).
Use JSTOR to find an article from the PUBLIC OPINION QUARTERLY and write a brief review of the research design. (NO OTHER JOURNAL WILL BE ACCEPTED AND YOU WILL GET A ZERO IF YOU USE ANYTHING ELSE.) DUE: MARCH 25

WEEK 12—MARCH 30—APRIL 3
REVIEW: Homework 9—The Civic Culture—Using frequencies to compare populations, WED. APRIL 1. (This homework will be discussed in class so your homework must be turned in at the beginning of class. Bring a copy.)

B. Measuring Relationships-- Bivariate Analysis
   1. Analyzing Cross-tabulation Tables


Friday Lab: Using SPSS to run cross-tabulation tables and correlation coefficients
HOMEWORK 9: Almond and Verba (see web page READINGS), frequency tables DUE: APRIL 1
HOMEWORK 10: Agresti and Agresti problems using univariate statistics (See web page READINGS). Running frequencies within groups using SPSS. DUE: APRIL 3

WEEK 13—APRIL 6–10
2. Correlation coefficients(ordinal and interval measures)
3. Tests of significance
   Testing the Null Hypothesis
   Probabilities

Friday Lab: Three methods of generating correlation coefficients in SPSS
HOMEWORK 11: Hand calculating and analyzing crosstabulation tables. DUE: APRIL 10
WEEK 14—APRIL 13—17
C. Establishing Causality
   1. Spurious Correlation
   2. Regression and Causation


   Friday Lab: Using SPSS to run regression analysis and creating dummy variables
   HOMEWORK 12: Using SPSS to run cross-tabulation tables DUE: APRIL 15
   HOMEWORK 13: (Campbell et al. and Jennings) Interpretation of graphs and Pearson correlation coefficients DUE: APRIL 17

WEEK 15—APRIL 20--24
3. Regression: B’s and Beta-weights, explained variation
4. Dummy variables—including nominal variables in regression
5. Curvilinear relationships
4. Comparing regression models


   Friday Lab: Dummy variables in SPSS—interpretation of dummy variables
   HOMEWORK 14: Generating correlation coefficients in SPSS and interpreting the output from the different correlation techniques. DUE: APRIL 24

WEEK 16—APRIL 22—MAY 1
5. Reading regression tables in journals
6. Violating regression assumptions—time-series analysis, logit and probit

   Friday Lab: NO LAB
   HOMEWORK 15: Using SPSS to generate regression, and interpreting the SPSS output DUE: APRIL 29
   HOMEWORK 16: Comparing regression models DUE: APRIL 29

The Teaching Assistants for this class are:
Kate Pozworski
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Beering Room 2231
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S. Parker
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         F 11:30—1:30 AND by appointment
Students with disabilities needing academic accommodations should inform the professor. This should be done within the first week of class. Your privacy will be respected.

THE ACADEMIC HONOR SYSTEM IS BASED ON THE PREMISE THAT EACH STUDENT HAS THE RESPONSIBILITY (1) TO UPHOLD THE HIGHEST STANDARDS OF ACADEMIC INTEGRITY IN THE STUDENT'S OWN WORK; (2) TO REFUSE TO TOLERATE VIOLATIONS OF ACADEMIC INTEGRITY IN THE UNIVERSITY COMMUNITY, AND (3) TO FOSTER A HIGH SENSE OF INTEGRITY AND SOCIAL RESPONSIBILITY ON THE PART OF THE UNIVERSITY COMMUNITY. IN THIS COURSE ACADEMIC DISHONESTY (CHEATING) WILL NOT BE TOLERATED.

ALL STUDENTS are encouraged to attend office hours if you are having difficulties with the course material. It is easier to remedy your problems if you come early rather than waiting until the end of the course. If you cannot make the office hours, please set up an appointment to meet with me or your teaching assistant.

IN CASE OF AN EMERGENCY ON CAMPUS:

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in this course. The class web page, my email address: parker5@purdue.edu, and my office phone: 4963923, the Department of Political Science phone 4944161. 

1/10/15