COURSE REQUIREMENTS:

1. There will be 7-8 homework assignments. These will involve computer analysis using the Statistical Package for the Social Sciences (SPSS). This work will constitute thirty percent (30%) of your course grade. It is ESSENTIAL that this work is done ON TIME, which I define as 3:00 pm on the date due, unless otherwise noted. Late papers will lose 1 point (of a possible 10) of the grade per calendar day.

2. Each student will prepare two 10-12 page papers based on independent analysis of data on a topic chosen by the student. A more detailed description of this requirement will be given later.

   Paper 1 is due Friday, October 21 at 3:00 PM. (30% of course grade)
   Paper 2 is due Friday, December 9 at 3:00 PM. (40% of course grade)

Late papers will be penalized 3 (or 4) points (of a possible 30 or 40) per calendar day.

NOTE: For both Papers 1 and 2, except for catastrophic medical or grievous personal reasons, I will NOT grant extensions.

COURSE TEXTS:

Recommended Supplementary Reading:
Marija Norusis: SPSS 19.0 STATISTICAL PROCEDURES COMPANION (or version 18.0 or 22.0, etc.). Or Norusis: SPSS 19.0 GUIDE TO DATA ANALYSIS (or version 18.0 or 22.0, etc.).
Several other books may be of use for reference purposes and are on reserve in O’Neill:
Nancy Leech et al., SPSS FOR INTERMEDIATE STATISTICS (3rd ed.) HA32.L444
J. Levin & J. Fox, ELEMENTARY STATISTICS IN SOCIAL RESEARCH
   (Pearson 2004) HA29.L388
T. Smith and B.J. Arnold, ANNOTATED BIBLIOGRAPHY OF PAPERS
   USING THE GENERAL SOCIAL SURVEY HA155.S55
Sidney Siegel, NONPARAMETRIC STATISTICS H61 S.57
Rebecca M. Warner, APPLIED STATISTICS (Sage: 2008) HA31.35 W37
T. Smith and B.J. Arnold, ANNOTATED BIBLIOGRAPHY OF PAPERS USING THE GENERAL SOCIAL SURVEY
**For those who plan to take SOCY7703 in the spring:** Note that the Polit text and Norusis’s *Companion* will be used extensively in that course.

**RECOMMENDED for the HWs:** You might want to download the "SPSS Brief Guide 22.0.pdf" from this web page:


The “Brief Guide 22” can be used as a reference manual later in the course. Chs. 4-6 are worth browsing. NOTE: The 'Brief Guide" has 98 pages, so you may not want to print it.

The BC Application Server is called [apps.bc.edu](http://www.bc.edu/offices/help/teaching/app_server.html). It allows members of the BC community to access and use certain licensed applications, including the latest available version of SPSS, from any computer with a network connection. Here is some information on apps.bc.edu:

[http://www.bc.edu/offices/help/teaching/app_server.html](http://www.bc.edu/offices/help/teaching/app_server.html)

**In order to use apps.bc.edu you must first install Citrix Receiver on your Mac or PC.** Staff from BC’s Information Technology Help Desk and Research Services departments will attend our class on Sept. 1 in order to address questions regarding the installation and use of apps.bc.edu and the related cloud based data storage area. You may read more about Apps Storage at BC here:

[http://www.bc.edu/content/bc/offices/help/teaching/app_server/apps-files/saving.html](http://www.bc.edu/content/bc/offices/help/teaching/app_server/apps-files/saving.html)
TOPICS AND READINGS

Dates are subject to change
Additional topics may be added as time allows

1. INTRODUCTION; USING SPSS (Week of August 29)

Objectives: to learn some of the basics of SPSS programming; to submit an SPSS run.
Reading: Polit, Chs. 1-2; Handouts as assigned or distributed.
Linneman: Chs. 1 & 2 Warner, Chs. 1-2, and 4; Healey, Chs. 1-2; Norusis Guide 14.0, Cs. 1-2; Norusis Companion 16.0, Chs. 1-2 and 7

2. DESCRIPTIVE STATISTICS (Sep. 5, 12, 19)

Topics Considered: level of measurement (nominal, ordinal, interval, ratio), histograms, measures of central tendency, measures of dispersion, percentiles, Z scores, mean, median, mode, variance, standard deviation, standard error, skewness, range, the normal distribution. Other topics as deemed appropriate.
SPSS Objectives: to be able to use, and interpret the output of, the FREQUENCIES and DESCRIPTIVE procedures in SPSS.

Reading:
Polit, Chs. 3 and 5.
Linneman: Ch. 3. Healey, Ch. 3-4; Warner, Chs. 1, 2, and 4; Norusis Guide Ch. 5; Norusis Companion, Chs 3-6 and 10; Levin & Fox (L&F), Chs. 1-6 (esp. 5 and 6); Malec, Chs. 1-4.

3. DIFFERENCES IN MEANS (Sept. 26, Oct. 3. 10)

Topics Considered: probability; sampling distribution, samples vs populations, simple random samples vs other types of samples; the research hypothesis, the null hypothesis, directional vs nondirectional research hypotheses; alpha and the critical region; Type I vs Type II error; statistical significance vs substantive significance, sampling distribution of the mean, confidence intervals, one-tailed vs two-tailed tests; the t-test; equal (or pooled) variance estimate vs unequal (or separate) variance estimate; simple one-way analysis of variance. Other topics as deemed appropriate.
SPSS Objectives: to be able to use, and interpret the output of, the T-TEST and ONEWAY procedures.

Reading:
Polit, Chs. 6-7.
Linneman, Ch. 5 & 6.Warner, Chs. 3, 5 and 6; Norusis Guide Cha. 10-14; Norusis Companion, Chs. 7-9; L&F, Chs. 10 and 11; Malec, Ch. 7
NOTE: Paper 1 is due Friday, October 21 at 3:00 PM (30% of course grade). Late papers will be penalized 3 points (of a possible 30) per calendar day.

4. CROSSTABULATION & MEASURES OF ASSOCIATION (Oct. 17, 24, 31),

Topics Considered: measures of association (nominal measures, Chi-Square, PRE measures, ordinal measures); tests of significance; the elaboration paradigm (explanation, interpretation, specification, spurious relationships, suppressor variables); main and interaction effects in crosstabs tables. Other topics as deemed appropriate.
SPSS Objectives: to be able to use, and interpret the output of, the CROSSTABS procedure.
Reading:
Polit, Ch. 8 (to p. 178 only).
Linneman: Ch. 4; Warner, Ch. 8 and section 10.12; Norusis Guide Ch. 17 to p. 377), 18 (pp. 400-402) and 19; Norusis Companion, Ch. 10 (also 447-451); Malec, Ch. 8, 9 (pp. 137-154), 11 (pp. 184-193); L&F, Chs. 7-9, 12, and 13 (pp. 330-354)

5. PEARSON CORRELATION COEFFICIENT, PARTIAL CORRELATION, SCATTERPLOTS, AND SIMPLE REGRESSION (Nov. 7, 14)

Topics Considered: the Pearson correlation coefficient, R-square, slope, intercept, the equation for a regression line, use and interpretation of scattergrams, partial correlation, higher order partials. Other topics as deemed appropriate.
SPSS Objectives: to be able to use, and interpret the output of, the CORRELATIONS and PARTIAL CORR procedures.
Reading:
Polit, Ch. 9.
Linneman: Ch. 7 & 8; Warner, Ch. 7, 9 and 10.1-10.11, also skim Ch. 11; Norusis Guide Ch. 20; Norusis Companion Chs. 11-12 and pp. 237-254; L&F Ch. 13 (to p. 330); Malec, Ch. 9 (pp. 154-158), 10, 11 (pp. 189-192)

Nov. 24 is Thanksgiving – no class.
6. **NONPARAMETRIC TESTS** (Dec. 5)

**Objectives:** to be able to use, and interpret the output of, the **NONPAR TESTS** and **NONPAR CORR** procedures

**Topics Considered:**
Spearman’s rank correlation coefficient, Mann-Whitney test (and others as time allows).
Other topics as deemed appropriate.

**Reading:** Polit, Ch. 8 (pp. 178-194).

**Paper 2 is due Monday, December 14 at 3:00 PM** (40% of course grade). Late papers will be penalized 4 points (of a possible 40) per calendar day.

**ACADEMIC INTEGRITY**

It is your obligation to be fully aware of the Boston College policies on academic honesty. ANY violation may subject the offender to severe penalty, including course failure. If you are not familiar with the Boston College policy on academic honesty, see:

[http://www.bc.edu/offices/stserv/academic/integrity.htm](http://www.bc.edu/offices/stserv/academic/integrity.htm)