Instructor Information: Emilie Dubois (duboise@bc.edu)
Office Hours and Location: Tuesday 1:00 p.m. – 2:30 p.m. McGuinn 502a
Meeting Days, Times, and Location: Tuesdays & Thursdays, 3:00 p.m. – 4:15 p.m. Cushing Hall 209
Tests: September 25 (Thursday), October 23 (Thursday), November 20 (Thursday)
Final Exam: December 20, 2014 (Saturday) 9:00 a.m. – 12:00 p.m.

Teaching Assistant Information: Mehmet Cansoy (cansoy@bc.edu)
Office Hours and Location: Tuesday 1:00 pm – 2:45, Wednesday 11:45 – 1:45, Thursday 1:00 – 2:45
McGuinn 410

Course Description:
This course combines computation techniques with applied SPSS analysis of data in order to help students develop an understanding of the importance of statistics in the social sciences.

Required Text:

2. IBM SPSS 22 Brief Guide (download)

Course Requirements:
1. No electronics in the classroom. This policy includes cell phones and computers.
2. Two tests will account for 50% of the course grade. Three tests will be administered, however, only the two strongest scores will count as part of the final grade. Make up tests are not possible because of the “best 2 out of 3” policy.
3. One Final Exam will account for 25% of the course grade. The only available final exam date and time are December 20, 2014 at 9:00 a.m.
4. Six homework assignments will consist of 25% of the final course grade. These homework assignments are due on the date specified without exception. Late submissions are penalized by 10% per calendar day.
5. Please review Boston College’s statement on Academic Integrity. The successful completion of this course requires your compliance with the University’s policy.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Objectives</th>
<th>Read</th>
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<tbody>
<tr>
<td>September 2 &amp; 4</td>
<td><strong>Why Social Researchers Use Statistics</strong></td>
<td>- Recognize the importance of social research and its dependence on statistics</td>
<td><em>Elementary Statistics in Social Research (Chapter 1)</em></td>
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<tr>
<td>September 9 &amp; 11</td>
<td><strong>Organizing the Data</strong></td>
<td>- Recognize dependent and independent variables</td>
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<td>- Recognize the steps of hypothesis testing</td>
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<td>- Recognize various levels of measurement</td>
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<td>September 16 &amp; 18</td>
<td><strong>Measures of Central Tendency</strong></td>
<td>- Make simple frequency distributions out of raw data</td>
<td><em>Elementary Statistics in Social Research (Chapter 2)</em></td>
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<td>- Make grouped frequency distributions out of raw data</td>
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<td>- Calculate class limits, midpoints, cumulative frequencies, frequency percentages, and cumulative percentages for a given distribution</td>
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<td>- Choose whether to use total, row, or column percent within a cross tabulation</td>
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<td>- Identify various types of graphs and graphical representations</td>
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<td>September 23 &amp; 25</td>
<td><strong>Measures of Variability</strong></td>
<td>- Understand that the range is a rough and easy to calculate characteristic of the data set</td>
<td><em>Elementary Statistics in Social Research (Chapter 3)</em></td>
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<td>- Recognize why the variance and standard deviation are calculated by first squaring and then taking the square root of the deviations</td>
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<td>- Calculate the variance and standard deviation for a given data set</td>
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<td>- Recognize the importance of standard deviations in describing or comparing interval level datasets</td>
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<td>- Construct and interpret box plots</td>
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<td>September 30 &amp; 18</td>
<td><strong>Probability and the Normal Curve</strong></td>
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October 2

**Objectives:**
- Understand the importance and practicality of probability in real life
- Understand and remember the rules of probability
- Calculate hypothetical probabilities of events
- Note the difference between hypothetical and empirical probabilities
- Understand the normal distribution and its importance to social research
- Calculate z scores from raw scores and raw scores from z scores
- Be able to use Table A for finding probabilities of an event occurring

**Read:** *Elementary Statistics in Social Research* (Chapter 5)

October 7 & 9  
**Topic:** Samples and Populations

**Objectives:**
- Understand the difference between sample and populations
- Understand the types of sampling and sampling errors
- Understand the sampling distribution of means
- Find the margin of error for a given level of confidence
- Find confidence intervals for means and proportions
- Understand difference between z (normal) and t distributions

**Read:** *Elementary Statistics in Social Research* (Chapter 6)

October 14 & 16  
**Topic:** Testing Differences between Means

**Objectives:**
- Be able to differentiate between and formulate correctly the null hypothesis and the research hypothesis for differences between means
- Understand and utilize the level of significance for measurement and hypothesis testing
- Be able to recognize when to use z scores and when to use t scores when testing hypotheses
- Identify statistically significant differences and perform both one tailed and two tailed tests as necessary

**Read:** *Elementary Statistics in Social Research* (Chapter 7)

October 21 & 23  
**Topic:** Analysis of Variance

**Objectives:**
- Understand the importance of the F ratio and its uses
- Calculate sum of squares and mean squares and understand their significance
- Perform an ANOVA analysis
- Perform a two way ANOVA analysis

**Read:** *Elementary Statistics in Social Research* (Chapter 8)
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<tbody>
<tr>
<td>October 28 &amp; 30</td>
<td>Nonparametric Tests of Significance</td>
<td><strong>Objectives:</strong></td>
<td><em>Elementary Statistics in Social Research (Chapter 9)</em></td>
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<tr>
<td>November 4 &amp; 6</td>
<td>Correlation</td>
<td><strong>Objectives:</strong></td>
<td><em>Elementary Statistics in Social Research (Chapter 10)</em></td>
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<td>November 11 &amp; 13</td>
<td>Regression Analysis</td>
<td><strong>Objectives:</strong></td>
<td><em>Elementary Statistics in Social Research (Chapter 11)</em></td>
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<td>November 18 &amp; 20</td>
<td>Nonparametric Measures of Correlation</td>
<td><strong>Objectives:</strong></td>
<td><em>Elementary Statistics in Social Research (Chapter 12)</em></td>
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<td>November 25</td>
<td>December 2</td>
<td>SPSS Research &amp; Final Review</td>
<td><strong>Objectives:</strong></td>
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SPSS Citrix Information

1. Download the "SPSS Brief Guide 22.0.pdf" from this web page:
   b. The "Brief Guide" can be used as a reference manual later in the course.
   c. Members of the Boston College community may use SPSS 22 at no additional charge on apps.bc.edu.
   d. The BC Application Server is called apps.bc.edu. It allows members of the BC community to access and use certain licensed applications, including SPSS 22, from any computer with a network connection.

2. Here is some information on apps.bc.edu:
   a. http://www.bc.edu/offices/help/teaching/app_server.html
   b. In order to use apps.bc.edu you must first install Citrix Receiver on your MAC or PC.
   c. Staff from BC's Information Technology Help Desk and Research Services department will attend one of our first classes in order that they may address questions regarding the installation and usage of apps.bc.edu and the related cloud based data storage area

3. AppsStorage.bc.edu.
   a. You may read about AppsStorage.bc.edu here:
   b. http://www.bc.edu/content/bc/offices/help/teaching/app_server/apps-files/saving.html