**PSYC112001 Introduction to Behavioral Statistics & Research, 3 Credits**  
**Boston College Summer Session 2017**  
**Summer 1, May 17 – June 22**  
**Tuesdays and Thursdays 6:00 PM – 9:15PM**

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**Office:** McGuinn 503  
**Office Hours:** Monday and Wednesday 9-10; Tuesday and Thursday 4:30-5:30

**Boston College Mission Statement**

Strengthened by more than a century and a half of dedication to academic excellence, Boston College commits itself to the highest standards of teaching and research in undergraduate, graduate and professional programs and to the pursuit of a just society through its own accomplishments, the work of its faculty and staff, and the achievements of its graduates. It seeks both to advance its place among the nation's finest universities and to bring to the company of its distinguished peers and to contemporary society the richness of the Catholic intellectual ideal of a mutually illuminating relationship between religious faith and free intellectual inquiry.

Boston College draws inspiration for its academic societal mission from its distinctive religious tradition. As a Catholic and Jesuit university, it is rooted in a world view that encounters God in all creation and through all human activity, especially in the search for truth in every discipline, in the desire to learn, and in the call to live justly together. In this spirit, the University regards the contribution of different religious traditions and value systems as essential to the fullness of its intellectual life and to the continuous development of its distinctive intellectual heritage.

**Course Description**

This course is the first in a two-semester sequence surveying research methodologies and statistical procedures. In this first semester the emphasis is on statistics. Students will be introduced to the most common topics and procedures in descriptive and inferential statistics.

**Textbooks & Readings (Required)**

The required textbook for this course is the online textbook *Statistics for the Social Sciences* published by Top Hat. Using this textbook will require you to purchase both a subscription to the Top Hat online service as well as the textbook itself. Note, however, even this combination, at around $70, will be a fair bit less expensive than a typical textbook. I will “invite” you to the course, at which time you can purchase your subscriptions through the Top Hat website. Alternatively, you may purchase them by picking up subscription cards from the Boston College Bookstore.
Textbooks & Readings (Recommended)

There are several free online textbooks which may serve as good additional resources. One notable option is *Introductory Statistics*, by Illowsky and Dean and published by the OpenStax initiative, and which can be accessed at [https://openstax.org/details/books/introductory-statistics](https://openstax.org/details/books/introductory-statistics). There are several ways to use this text. For free you may read the textbook online by choosing “View online” from the page linked above, which permits you to read the text as formatted to the web, and to use using interactive features (e.g., hyperlinks to problem solutions). This approach is fine for laptop computers, but may not be ideal for tablets. For free you may also choose to “Download a pdf”, which provides more of the experience of a paper textbook, although without some of the interactive features. For $5, an iBooks version can be downloaded from the same page for use on Macs or iOS devices. This works very well, combining the textbook-style layout of the pdf with the interactive aspects of the web version. Finally, for $33.50 a full printed copy can be ordered from Amazon.

An additional web-based introductory textbook, *Concepts and Applications of Inferential Statistics* by Richard Lowry can be found at [vassarstats.net/textbook/](http://vassarstats.net/textbook/). This can only be viewed on the web and is not nearly as graphically polished as the main text, but is a good resource nonetheless.

Canvas

Canvas is the Learning Management System (LMS) at Boston College, designed to help faculty and students share ideas, collaborate on assignments, discuss course readings and materials, submit assignments, and much more - all online. As a Boston College student, you should familiarize yourself with this important tool. For more information and training resources for using Canvas, click here. In the case of any technical difficulties or concerns, please contact canvas@bc.edu or 617-552-HELP (4357) for immediate assistance.

NOTE: Canvas requires particular computer specifications and wifi access. It is important that you plan accordingly, particularly for courses that have online components.

Course Objectives

1. Students will demonstrate knowledge across cultural settings and will learn the impact of culture, gender, and age in statistical science as demonstrated by the use of statistics in sociology, economics, public health, and psychology.
2. Students will demonstrate ethical knowledge pertaining to statistical science as demonstrated by familiarity with questionable research practices and other misuse of statistics.
3. Students will be able to apply basic principles of data collection and analysis to particular research problems.
4. Students will be able to communicate effectively, orally and in writing.

It is expected that you will spend 8 hours per week on out-of-class assignments and exercises. These are listed below. Please note that some weeks will require more time and some weeks less time but the average is approximately 8 hours per week over the semester.

Grading

Grades will be assigned on the basis of weekly tests, corresponding to material covered by the instructor
during the previous week’s class, and roughly corresponding to one or two chapters in the textbook. These tests will have the following features:

1. All tests will be taken electronically via Canvas.
2. Tests will occupy approximately the final half hour of each class meeting, except for class meetings labeled “exam” on the course schedule, during which more of the class meeting will be available for testing.
3. Each test may be taken an unlimited number of times, although the questions asked each time the test is taken may change.
4. Only the grade received the final time a test is taken will count towards final grades.
5. No partial credit will be given for wrong answers.
6. The passing grade for each test is 85%. A score of less than 85% any time a test is taken will be recorded as a zero (but see #2 above).

Final semester grades will be calculated as the average of all test grades as recorded, including zeros for tests that did not reach 85%. Final letter grades will be assigned according to the following scale.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>&lt;60.00</td>
<td>D</td>
<td>60.00-63.33</td>
<td>C</td>
<td>70.00-73.33</td>
</tr>
<tr>
<td>D+</td>
<td>63.34-66.66</td>
<td>C+</td>
<td>73.34-76.66</td>
<td>B</td>
<td>80.00-83.33</td>
</tr>
<tr>
<td>D</td>
<td>66.67-69.99</td>
<td>B+</td>
<td>83.34-86.66</td>
<td>A</td>
<td>86.67-89.99</td>
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<tr>
<td>A</td>
<td>89.99-100</td>
<td>A-</td>
<td>90.00-93.33</td>
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The undergraduate grading system for Woods College is as follows:

A (4.00), A- (3.67)
B+ (3.33), B (3.00), B- (2.67)
C+ (2.33), C (2.00), C- (1.67)
D+ (1.33), D (1.00), D- (.67)
F (.00)

All students can access final grades through Agora after the grading deadline each semester. Students who complete course evaluations can access grades earlier, as they are posted.

Course Schedule
The course schedule is preliminary and does not include all readings and assignments. The official course schedule, with continually updated readings and assignments will be posted to the course Canvas homepage.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Top Hat Textbook readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/16</td>
<td>Basic concepts/Data display</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>5/18</td>
<td>Central tendency/variability</td>
<td>Chapter 2</td>
</tr>
<tr>
<td>5/23</td>
<td>Probability/Normal</td>
<td>Chapters 3 &amp; 4</td>
</tr>
</tbody>
</table>
### Written Work
Woods College students are expected to prepare professional, polished written work. Written materials must be typed and submitted in the format required by your instructor. Strive for a thorough yet concise style. Cite literature appropriately, using APA, MLA or CLA style per your instructor’s requirements. Develop your thoughts fully, clearly, logically and specifically. Proofread all materials to ensure the use of proper grammar, punctuation and spelling. For writing support, please contact the Connors Family Learning Center.

### Attendance
Attending class is an important component of learning. Students are expected to attend all class sessions. When circumstances prevent a student from attending class, the student is responsible for contacting the instructor before the class meets. Students who miss class are still expected to complete all assignments and meet all deadlines. Many instructors grade for participation; if you miss class, you cannot make up participation points associated with that class. Makeup work may be assigned at the discretion of the instructor. If circumstances necessitate excessive absence from class, the student should consider withdrawing from the class.

Consistent with BC’s commitment to creating a learning environment that is respectful of persons of differing backgrounds, we believe that every reasonable effort should be made to allow members of the university community to observe their religious holidays without jeopardizing their academic status. Students are responsible for reviewing course syllabi as soon as possible, and for communicating with the instructor promptly regarding any possible conflicts with observed religious holidays. Students are responsible for completing all class requirements for days missed due to conflicts with religious holidays.

### Accommodation and Accessibility
Boston College is committed to providing accommodations to students, faculty, staff and visitors with disabilities. Specific documentation from the appropriate office is required for students seeking accommodation in Woods College courses. Advanced notice and formal registration with the appropriate office is required to facilitate this process. There are two separate offices at BC that coordinate services for students with disabilities:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter/Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/25</td>
<td>Distribution Sampling/Single-sample tests</td>
<td>Chapters 9 &amp; 10</td>
</tr>
<tr>
<td>5/30</td>
<td>Paired t-test/Ind. Sample t-test</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>6/1</td>
<td>EXAM/One-way ANOVA</td>
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</tr>
<tr>
<td>6/6</td>
<td>ANOVA</td>
<td>Chapter 12</td>
</tr>
<tr>
<td>6/8</td>
<td>ANOVA</td>
<td></td>
</tr>
<tr>
<td>6/13</td>
<td>Correlation</td>
<td>Chapter 14</td>
</tr>
<tr>
<td>6/15</td>
<td>Regression</td>
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<tr>
<td>6/20</td>
<td>Non-parametrics/review</td>
<td>TBA</td>
</tr>
<tr>
<td>6/22</td>
<td>EXAM</td>
<td></td>
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</tbody>
</table>
- The Connors Family Learning Center (CFLC) coordinates services for students with LD and ADHD.
- The Disabilities Services Office (DSO) coordinates services for all other disabilities.

Find out more about BC’s commitment to accessibility at www.bc.edu/sites/accessibility.

Scholarship and Academic Integrity
Students in Woods College courses must produce original work and cite references appropriately. Failure to cite references is plagiarism. Academic dishonesty includes, but is not necessarily limited to, plagiarism, fabrication, facilitating academic dishonesty, cheating on exams or assignments, or submitting the same material or substantially similar material to meet the requirements of more than one course without seeking permission of all instructors concerned. Scholastic misconduct may also involve, but is not necessarily limited to, acts that violate the rights of other students, such as depriving another student of course materials or interfering with another student’s work. Please see the Boston College policy on academic integrity for more information.