Instructor: Michelle Hurst
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Office: McGuinn Hall 346
Office Hours: By appointment

Summer Session 2: June 27-Aug 5
Schedule: M & W; 6:00-9:15PM
Room: TBD

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 intended to provide students with an introduction to statistics used in the behavioral sciences. Students will be introduced to the most common topics and procedures in descriptive and inferential statistics. Throughout the course, the statistical topics will be discussed within the context of behavioral research, providing students with an overview of some common research designs. Topics will include descriptive statistics, data displays, probability, t-tests, and on-way ANOVA.

Course Objectives
1. The student will become familiar with techniques used to organize and analyze data.
2. The student will be able to calculate and interpret common descriptive statistics.
3. The student will become familiar with some common statistical tests used in hypothesis testing.
4. The student will be able to: (1) choose the appropriate test for a given situation, among the tests learned, (2) carry out the calculations required for executing the test, and (3) interpret the results of the tests within the context of the research question.
5. The student will have a foundation of basic statistical knowledge that will allow them to learn more advanced statistical techniques and become engaged in the field of behavioral science research.
6. Students will demonstrate an ethical understanding of the use of statistics in behavioral science research.

Required Text
**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.

**Course Content**  
It is expected that 8 hours per week will be spent on out-of-class assignments. Specifically, your time will be spent completing the assigned readings, the assignments, and studying for exams. These items are described in more detail 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. For classes like statistics the best way to do well in a course is to regularly do statistics problems. This will be encouraged through assignments and quizzes, however additional practice problems and regular studying are strongly encouraged.

Your grade in this course will be determined by:

- Assignments (30%)
- Attendance & Quizzes (15%)
- Test 1 (15%)
- Test 2 (15%)
- Cumulative Exam (25%)

**Assignments**  
There will be three assignments throughout the semester. They will be due in hard copy at the beginning of class on the due date. Assignments will contain 5 questions (possibly with sub sections). Three of those questions will be mandatory and two of those questions will not be required. The two extra non-required questions are meant to help you in your studying process, since the only way to learn stats is by doing stats. At least one of the six “non-required” homework questions will be verbatim on the final exam, so I highly recommend you work through them.

**Attendance & Quizzes**  
At the end of each class we will have a quiz on the material taught in that class. Some of the quiz grade will be for attendance (if you hand in the quiz, you’ll automatically get points) and some will be actually graded. These quizzes are meant to encourage you to pay attention to the material as it is being taught and will be directly from the lecture just given. Since the material will be new, these quizzes will be “open book” in the sense that you can look at your notes from the class to help you answer them.

**Tests and Exams**  
There will be two in class tests and one in class exam (cumulative). The tests and exams will include a mix of multiple choice, calculations, and short answers. The two tests will be worth 15% each. The cumulative exam will be worth 25%. All tests and exams will be in class. Tests and exams will be “closed book” in the traditional sense where no notes or textbooks are allowed during the exam. You will be allowed to use a calculator but it cannot be a graphing calculator. There will be no make-up tests unless prearranged with the instructor.
**Required Readings**
Each lecture topic will be associated with assigned readings from the required textbook. Although the assignments, quizzes, and exams will not test on items presented solely in the textbook, it is a very good resource for learning about the material. In order to best prepare for lecture, I recommend reading the textbook prior to coming to class and using it to clarify confusions that may have arisen during class.

**Schedule of Topics**

<table>
<thead>
<tr>
<th>Week</th>
<th>Class</th>
<th>Topics</th>
<th>Readings</th>
<th>Assignments/Quizzes/Tests</th>
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<tbody>
<tr>
<td><strong>June 27</strong></td>
<td>Monday</td>
<td>Course Overview&lt;br&gt;Basic Concepts/Notations/Variables&lt;br&gt;Data Displays</td>
<td>Chapters 1, 2, &amp; 3</td>
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<td></td>
<td>Wednesday</td>
<td>Central Tendency&lt;br&gt;Variability</td>
<td>Chapters 4, 5, &amp; 6</td>
<td>Quiz 1</td>
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<td><strong>July 4</strong></td>
<td>Monday</td>
<td>NO CLASS - HOLIDAY</td>
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<td></td>
<td>Wednesday</td>
<td>Normal Distribution&lt;br&gt;Probability</td>
<td>Chapters 6 &amp; 7</td>
<td>Assignment 1 Due Quiz 2</td>
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<td><strong>July 11</strong></td>
<td>Monday</td>
<td>TEST 1&lt;br&gt;Sampling&lt;br&gt;Introduction to t-tests</td>
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<td>TEST 1</td>
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<td></td>
<td>Wednesday</td>
<td>Single Sample t-tests&lt;br&gt;Paired t-tests</td>
<td>Chapters 8, 12 &amp; 13</td>
<td>Quiz 4</td>
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<td><strong>July 18</strong></td>
<td>Monday</td>
<td>Paired t-tests&lt;br&gt;Independent t-tests</td>
<td>Chapters 13 &amp; 14</td>
<td>Assignment 2 Due Quiz 5</td>
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<td></td>
<td>Wednesday</td>
<td>Independent t-tests&lt;br&gt;Plus: small review of previous topics for Test 2</td>
<td>Chapter 14</td>
<td>Quiz 6</td>
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<td><strong>July 25</strong></td>
<td>Monday</td>
<td>TEST 2&lt;br&gt;Introduction to ANOVA</td>
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<td>TEST 2</td>
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<td></td>
<td>Wednesday</td>
<td>One-way ANOVA&lt;br&gt;Introduction to Two-way ANOVA</td>
<td>Chapters 16 &amp; 17</td>
<td>Quiz 7</td>
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<td><strong>August 1</strong></td>
<td>Monday</td>
<td>If needed: “slush” class to make up time&lt;br&gt;If time: Two-way ANOVA&lt;br&gt;Review for Final Exam – Q&amp;A</td>
<td>Chapter 17</td>
<td>Assignment 3 Due Quiz 8</td>
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<td></td>
<td>Wednesday</td>
<td>FINAL EXAM</td>
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<td>FINAL EXAM</td>
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Important Policies

WCAS Grading System
The undergraduate grading system consists of twelve categories: A (4.00), A- (3.67), excellent; B+ (3.33), B (3.00), B- (2.67), good; C+ (2.33), C (2.00), C- (1.67), satisfactory; D+ (1.33), D (1.00), D- (.67), passing but unsatisfactory; F (.00), failure; I (.00), incomplete; F (.00), course dropped without notifying office; W (.00), official withdrawal from course. The graduate grading system is A (4.00), A- (3.67), Excellent; B+ (3.33), B (3.00), good; B- (2.67), C (2.00), passing but not for degree credit; F (.00), failure. All students can access final grades through Agora after the grading deadline each semester. Transcripts are available through the Office of Student Services.

Scholarship and Academic Integrity
Students in Summer Session 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.

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 Summer Session 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: 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.

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. A component of your grade will be for class attendance; 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.

Deadlines
Assignments are due at the beginning of the class period on the specified dates. Late assignments will be graded accordingly.