

*Please note that this syllabus should be regarded only as a general guide to the course and is subject to change at the instructor's discretion.

MATH335302 Statistics, 3 Credits
Boston College Summer Session 2019
Summer 2, June 24 – July 31
Monday, Wednesday 6:00-9:15

Instructor Name: Daniel W. Chambers
BC E-mail: chambers@bc.edu
Phone Number: 617-552-3769
Office: 543 Maloney Hall
Office Hours: M, W 5:00-6:00

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

Introduction to inferential statistics covering the description of sample data, probability, binomial and normal distribution, random sampling, estimation, and hypothesis testing.

Textbooks & Readings (Required)

- Elementary Statistics, 13th edition, Mario Triola; Pearson Publications, Print
ISBN: 9780134462455, 0134462459; eText ISBN: 9780134464244, 0134464249

Textbooks & Readings (Recommended)

Canvas

I am using my own website rather than Canvas. Go to www2.bc.edu/daniel-chambers and follow the link.

Course Objectives

1. Students will demonstrate an appreciation of statistics across cultural settings and will learn the impact of culture, gender, and age in statistical analysis as demonstrated by response to examples used in class.
2. Students will demonstrate ethical appreciation of the importance of academic integrity pertaining to mastery of statistics as demonstrated by completing their work independently.
3. Students will Compute point estimates and confidence intervals for population means and proportions under various assumptions and proportions, demonstrated by problem solving in class participation, completion of outside assignments, and in-class exam performance
4. Students will Set up and test hypotheses for population means and proportions in one-and two-sample contexts, demonstrated by problem solving in class participation, completion of outside assignments, and in-class exam performance.

Grading

There will be weekly online assignments (optional), two quizzes, a midterm, and a comprehensive final, weighted as follows: quizzes one sixth each, midterm one third, and final one third. Final (letter) grades are then assigned on the basis of the class distribution of averages, with minor adjustments made as appropriate.

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)

The graduate grading system for Woods College is as follows:

A (4.00), A- (3.67)
B+ (3.33), B (3.00)
B- (2.67), passing but does not count toward degree
C (2.00), passing but not for degree credit

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.

Deadlines and Late Work

Late work will not be accepted unless there is an excused absence.

Course Assignments

It is expected that 8 hours per week will be spent on homework assignments and reading for the next class. Optional online assignments will be posted after each class. In addition, problems from the textbook will be assigned. These will not be graded, but will provide for discussion, in class and during office hours, of material and topics that need more clarification. The textbook assignments will be given on the class website: www2.bc.edu/daniel-chambers and follow the appropriate link.

Course Schedule

Date/Week	Topic	Reading/Problems assigned this day	Exams/Quizzes
June 24	Summarizing, graphing data, measures of center	1.1-2.2, 3.1-3.1	
June 26	Measures of variation and position	3.2, 3.3, 4.1	
July 1	Intro to probability, addition rule, multiplication rule	4.2, 4.3	
July 3	Probability distributions, binomial distributions	5.2,5.3,5.4	Quiz 1
July 8	Normal distributions, central limit theorem, normal approximation to binomial	6.2, 6.3, 6.5, 6.7	
July 10	Estimating population means and proportions	7.2, 7.3	
July 15			Midterm
July 17	Hypothesis testing: population mean	8.2, 8.4	
July 22	Hypothesis testing: one mean; Type I and Type II errors	8.3, 9.2	Quiz 2
July 24	Hypothesis testing: two means, independent and dependent samples	9.3, 9.4, review	
July 29	Hypothesis testing: two proportions; correlation/regression mini lecture; hypothesis tests review		
July 31			Final

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. 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:

- [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.