BOSTON COLLEGE

SUMMER SESSION

MATH335301 Statistics, 3cr.,
Summer 1: May 14-June 21
Mondays and Wednesdays: 6:00 pm- 9:15 pm
Classes will be held on Commencement Day: Monday, May 20

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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: MT35301 Statistics: Introduction to inferential statistics covering description of sample data, probability, binomial and normal distributions, random sampling, estimation, and hypothesis testing. Specific topics are: introduction, frequency tables, frequency histograms, means and other measures of central tendency, variances, z-scores, an introduction to probability (sample spaces, frequency functions, independence, conditional probability, addition and multiplication rules), random variables, binomial distribution, mean, variance, and standard deviation of a probability distribution, the normal distribution, central limit theorem, normal approximation to the binomial, point and confidence intervals for means (small and large sample size cases), proportions, and variances, and one and two sample hypothesis test for means and proportions.

Textbooks & Readings (Required): Elementary Statistics, 13th edition, Mario Triola; Pearson Publications. MyStatLab is recommended and an access code is bundled with the book. Another option for the book is to get the ebook only with MyStatLab.

Textbooks & Readings (Recommended): MyStatLab (Recommended or instead of the book) MyStatLab access code comes bundled with the book or can be purchased separately along with an ebook at http://www.MyStatLab.com . This gives additional examples and explanations and datasets. Online assignments will be given for each class. The course id is clote73324

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 Objectives

1. Students will demonstrate an appreciation of statistics applied 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 gain insight into the moral dimension of economic policies and decision-making.
4. Students will be able to communicate effectively, orally and in writing.

Grading
There will be three quizzes and a comprehensive final, weighted as follows: quizzes 60%, final 40%. Tentative dates are: Quiz 1-Wednesday, May 22, Quiz 2: Wednesday, June 05, Quiz 3: Wednesday, June 12, Final: Wednesday, June 20.

The undergraduate grading system for Summer Session 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- (l.67)
D+ (l.33), D (l.00), D- (.67)
F (.00)

All students can access final grades through Agora after the grading deadline each semester. Transcripts are available through the Office of Student Services.

Deadlines and Late Work
When an occasion occurs that prevents a student from attending class, it is the student's obligation to inform the instructor of the conflict before the class meets. Makeup exam or quizzes will be scheduled. The student is still expected to meet all assignment deadlines.

Course Assignments
Students are expected to spend about 6-8 hours a week reading for the class and completing the assignments. The assignments and reading assignments will be given in class and on the course website on Canvas.
Please note that some weeks will require more time and some weeks less time but the average is approximately 6-8 hours per week over the semester.

Tentative schedule for the session:

Date	Topic	Reading	Exams
W. May 15	Summarizing and graphing data, measures of center	1.1-2.3, 3.1	
M. May 20	Measures of variation and position, probabilities, addition rule	3.2, 3.3, 4.1, 4.2	
W. May 22	Multiplication rule, conditional probability, random variables	4.2, 4.3, 5.1	Quiz 1
M. May 27	Memorial day: no classes		
W. May 29	Binomial distribution, moments for binomial distribution, normal distribution	5.2, 6.1, 6.2	
M. June 03	Sampling distributions, central limit theorem, normal approximation to binomial. Confidence intervals for proportions.	6.3, 6.4, 6.6, 7.1	
W. June 05	Point estimates and confidence intervals for a population proportion and for a population mean	7.1, 7.2	Quiz 2
M. June 10	Introduction to hypothesis testing, type I and II errors, hypothesis test for a proportion,.	8.1, 8.2	
W. June 12	Hypothesis testing for a mean: Z and t tests.	8.4	Quiz 3
M. June 17	Confidence intervals and hypothesis testing about 2 proportions, about 2 means: independent samples, dependent samples if times allows	9.1, 9.2, (9.3)	
W. June 19	Review and final		Final

Written Work

Summer Session 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. If a student misses a class, he or she is responsible for making up the work by obtaining a classmate's notes.
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 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.

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.

To register for MATH3353-01 Statistics :

1. Go to www.pearson.com/mylab .
2. Under Register, select **Student** .
3. Confirm you have the information needed, then select **OK! Register now** .
4. Enter your instructor's course ID: clote73324 , and **Continue** .
5. Enter your existing Pearson account **username** and **password** to **Sign In** .

   You have an account if you have ever used a MyLab or Mastering product.

   » If you don't have an account, select **Create** and complete the required fields.
6. Select an access option.

   » Enter the access code that came with your textbook or that you purchased separately from the bookstore.

   » If available for your course,

   • Buy access using a credit card or PayPal.

   • Get temporary access.
7. From the You're Done! page, select **Go To My Courses** .
8. On the My Courses page, select the course name **MATH3353-01 Statistics** to start your work.

To sign in later:

1. Go to www.pearson.com/mylab .
2. Select **Sign In** .
3. Enter your Pearson account **username** and **password,** and **Sign In** .
4. Select the course name **MATH3353-01 Statistics** to start your work.

To upgrade temporary access to full access:

1. Go to www.pearson.com/mylab .
2. Select **Sign In** .
3. Enter your Pearson account **username** and **password,** and **Sign In** .
4. Select **Upgrade access** for **MATH3353-01 Statistics .**
5. Enter an access code or buy access with a credit card or PayPal.