MATH10041 - Finite Probability and Applications (3 credits)
Boston College Summer Session 2016
Summer 2, June 26- August 2, 2017
M/W  6:00 PM - 9:15 PM

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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
This course is an introduction to finite combinatorics and probability, emphasizing applications. Topics include finite sets and partitions, enumeration, probability, expectation, and random variables.

Textbooks & Readings (Required)
Finite Mathematics & Its Applications (Third Custom Edition for Boston College)

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. The student will learn how to apply the principles of finite combinatorics and probability to real-world problems.
2. The student will improve their ability to communicate ideas in mathematics effectively and precisely, in both written and verbal forms.

Grading
In addition to homework (described below), there will be two midterms and a cumulative final. Your grade will be determined by a weighted average, as follows: 15% homework, 50% midterms (25% each), 30% final, and 5% participation. Your participation grade will take into account attendance, asking/answering questions in class, working on in-class assignments, and working with your peers.

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- (1.67)
D+ (1.33), D (1.00), D- (.67)
F (.00)

The graduate grading system for Summer Session 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. Transcripts are available through the Office of Student Services.

Deadlines and Late Work
Late homework will be accepted but marked off an additional 25% for each day it is late. (I strongly encourage you to complete any late assignments!) Contact me if you need to be excused from a homework assignment for valid reasons.

Course Assignments
Classwork. Since we have a lot to cover in a month, this will be a fast-paced class! We’ll do a considerable amount of work in class, since we’ll be meeting for 6.5 hours each week. To keep it interesting, our class time will be divided into lecture, individual and group work, and other activities, some of which will be graded.

Homework. The university position states that students should expect to spend a minimum of 2 hours per week for every hour of instructional time, which corresponds to 13 hours of time outside class. Make sure to budget this time into your week! There will be two or three homework assignments each week, some of which will be written assignments and some of which will be administered online. Solutions will be posted on Canvas after the due date. Homework grades will be based on two categories: completeness (i.e. you should attempt all problems) and correctness (which will be determined by grading a subset of the assigned problems). Written homework should be submitted on 8.5×11-inch paper. Multiple pages must be stapled together. (No loose pages, folded corners, or origami of any kind!) Your writing should be legible and easy to follow, your problems in order and clearly numbered. The lowest homework score will be dropped.

Course Schedule
The midterms are tentatively scheduled for July 10th and July 24th, and will be one hour long. The cumulative
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 you are concerned about missing class, please discuss it with me.

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.