Math UA 233 (Summer 2017 Session II)

Theory of Probability

M-T-W-Th, 2:10 p.m.-4:15 p.m., 194 Mercer St R305

Instructor: Hala AH Shehadeh

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Website: `http://educ.jmu.edu/~alhajjhy/`
Office Hours Location: Courant Institute (251 Mercer St) Room 312
Office Hours: Wednesdays 10:00 a.m.-12:00 p.m.

This syllabus might change with time depending on the pace of the class. The online website at NYU Classes will be set up during the first week of classes.

Course Description: 4 points. An introduction to the mathematical treatment of random phenomena occurring in the natural, physical, and social sciences. Axioms of mathematical probability, combinatorial analysis, binomial distribution, Poisson and normal approximation, random variables and probability distributions, generating functions, Markov chains applications.

Prerequisite(s): MATH-UA 123 Calculus III or MATH-UA 213 Math for Economics III (for Economics majors) with a grade of C or better and/or the equivalent, and MATH-UA 140 with a grade of C or better and/or the equivalent. Not open to students who have taken MATH-UA 235 Probability and Statistics.
Credit Hours: 4

Text: *A First Course In Probability*, 9$^{\text{th}}$ Edition. **Author:** Sheldon Ross.
ISBN: 978-0-321-79477-2.

Grade Distribution:

Assignments (mostly on each lecture, one point each)	22%
Test 1 (Th July 6)	8%
Test 2 (Th July 13)	10%
Test 3 (Th July 20)	10%
Test 4 (Th July 27)	10%
Test 5 (Th August 3)	10%
Final Exam- Cumulative (Th August 10)	30%

Letter Grade Distribution:

>= 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	<= 59.99	F

Course Policies:

- **Tests and Final Exam**

  - Tests and exams are closed book, closed notes.
  - The weekly Thursday tests are on the material covered during Monday, Tuesday and Wednesday of that same week.
  - The final exam is cumulative.
  - **No makeup tests or exams will be given.**

- **Grades**

  - Grades will be maintained at NYU Classes (once the course website is set). Students are responsible for tracking their progress by referring to the online Gradebook.

- **Assignments**

  - A homework is assigned on each lecture (mostly everyday) and its due date is assigned by the instructor.
  - Students are expected to work independently. **Offering** and **accepting** solutions from others is an act of **plagiarism**, which is a serious offense and **all involved parties will be penalized according to the Academic Honesty Policy**. Discussion amongst students is encouraged, but when in doubt, direct your questions to the professor.
  - **No late assignments will be accepted under any circumstances**.

- **Attendance and Absences**

  - Attendance is expected.
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.

Academic Honesty Policy: `https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/academic-integrity-for-students-at-nyu.html`

Tentative Course Outline:
The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the reading assignments. Not all sections in each chapter will be covered and you should keep track of the required sections in class. We'll cover selected sections from *all* chapters in the book.

Week	Content
Week 1	• 3 lectures • Chapters 1 and 2.
Week 2	• 4 lectures • Chapter 3.
Week 3	• 4 lectures • Chapter 4.
Week 4	• 4 lectures • Chapters 5 and 10.
Week 5	• 4 lectures • Chapters 6 and 7.
Week 6	• 3 lectures and **Final Exam**. • Chapters 8 and 9.