

PROBABILITY

Department of Statistics, Columbia University

Autumn 2018

Instructor: Regina Dolgoarshinnykh

Office: 1017 SSW (212-851-2150)

Email: regina@stat.columbia.edu

Lecture Time: Tue and Thu 8:40am - 11:25pm, SSW903

Class Webpage: All relevant materials will be posted on canvas. I will also be sending announcements through canvas, please make sure you have access.

Teaching Assistants:

Fan Gao fg2425@columbia.edu

Pratya Datta pd2511@columbia.edu

Prerequisite: A working knowledge of calculus.

Description: This course will cover probability theory including the following:

- Introduction to probability.
- Conditional probability.
- Distribution theory.
- Expectation.
- Special distributions.
- Large sample theory.

Textbook: *Probability & Statistics*, DeGroot & Schervish, 4th edition, Addison Wesley

Reference text: *Mathematical Statistics & Data Analysis*, Rice, Wadsworth

Grading: Quiz 5%; Homework 25%; Midterm 30%; Final 40%

Homework: Problem sets will be assigned about once a fortnight.

Other information

- Late homework will not be accepted under any circumstances.
- The process of getting the answer to a problem is as important as getting the answer correct. Your solutions (to the homework and examination questions) should include appropriate explanation so that someone else can easily understand your work. Full credit will not be given to solutions without proper explanation.
- You may work together, or discuss the more difficult problems of a homework assignment, but you must write-up the solutions on your own. No copying!
- No make-up midterm or final will be given. If there is a valid reason for missing the midterm (with documentary proof), attendance is regular, and all homework is handed in, a 70% weighting may be given to the final examination. However, the instructor must be informed **before** the examination. No such consideration will be given if the instructor is informed only after the examination.
- Severe penalties will be given if there is any evidence of cheating.
- If you need disability services, e.g. 1.5 time, you must inform the instructor within 2 weeks of the course (paperwork such as letters can be provided later). The examinations will then be proctored by the disability services office.